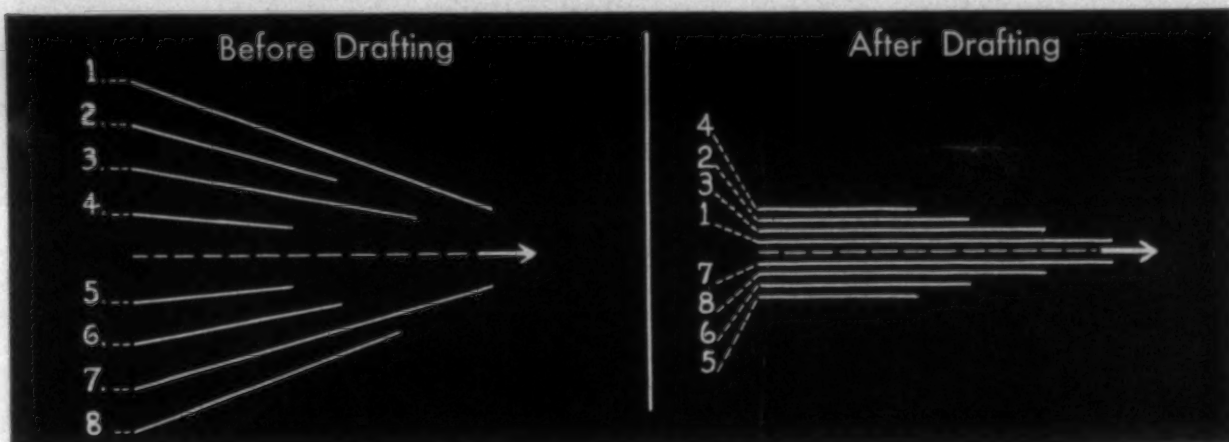


TEXTILE BULLETIN

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No. 23



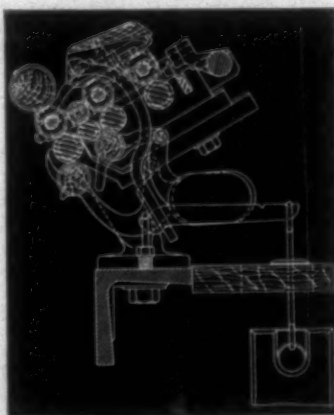
WHY H & B LONG DRAFT SPINNING MAKES A BETTER YARN

THE schematic diagram illustrates the drafting principle that the longer fibres, if allowed to assume their natural positions, will be pulled toward the center line of draft, while the shorter fibres will tend to move outward. This is essential for the making of good yarn.

A stronger and more uniform yarn results, because the longer fibres (forming the core) are not subjected to so much angular stress as if twisted around the shorter fibres. Being relieved of this excessive angular stress, they have less tendency to break up into shorter fibres.

H & B Long Draft Spinning gives the fibres more opportunity to assume their natural positions during the drafting operation than do other long draft systems, because it does not hamper the natural movement of the fibres with belts or other devices.

Roller No. 2 in the H & B system performs the same function as do the belts in other systems. That is, it prevents sagging and controls the shorter fibres. However it does not interfere with the natural movement of the fibres, because it makes a single point contact rather than a continuous contact.



Furthermore the bite of this roll is not carried so near to the front roll as in belt systems, so that a natural arrangement of the fibres occurs and "plucking" is prevented.

Note that in this four-roller system, fly (and other waste) has opportunity to fall clear. It does not bunch up and is not carried into the yarn.

The H & B Four-Roller system, being simpler, is of course cheaper to install and to maintain than more complicated systems, also cleaner. Specify H & B and get better quality as well as lower operating costs.

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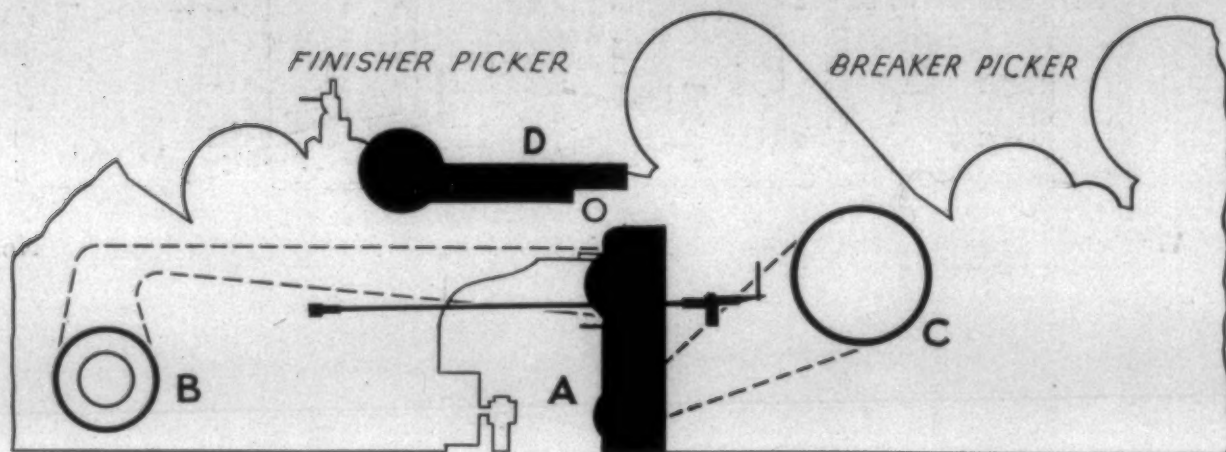
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Machinery*

PAWTUCKET, R. I.

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H & B FOUR-ROLLER LONG DRAFT SYSTEM



SACO-LOWELL MODEL B-5

Coordinated Picker Change-over

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The Change-over consists of four simple parts. A, the Cone Panel Drive, shipped completely assembled. B, the Fan Drive which drives the top auxiliary cone in A. C, the Breaker Drive which coordinates the stopping and starting of both units and causes the feed rolls of both to operate identically. D, new Apron Rail. A summary of its features follows:

- (1) Correct in principle and design—there are no parts to wear or break and cause inconveniences.
- (2) Simple in construction and positive in operation.
- (3) Easy to apply—the auxiliary cone panel drive is shipped completely assembled. None of the old calender gearing is used.
- (4) Inexpensive—few parts and novel design permit it to be installed at low cost.
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The B-5 produces REAL one-process picker results. You need not continue to run old 2- or 3-process picking when a small investment will give you the advantages of modern one-process operation.

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TEXTILE BULLETIN

VOL. 44—No. 23

AUGUST 3, 1933

INSTITUTE FOR
RESEARCH IN
SOCIAL SCIENCE

Price Levels and Buying Power

BY C. T. REVERE

Of Munds, Winslow & Potter.

IF the average industrial leader were asked to select the problem uppermost in the minds of business men today, he probably would say that it related to the ability of consumer buying power to absorb the products of industry on the basis of the increased costs necessitated by the operation of the National Industrial Recovery Act and the processing tax imposed by the farm relief program.

Herein lies the test of the practicability of these highly motivated reconstruction measures. The offtake at the higher price level will tell the story of success or failure. This is the phase that has given Washington its chief concern: Will the mandatory provisions for the increased working personnel and the minimum wage, combined with the benefits accruing to agriculture from the processing tax, furnish the buying power to take industry's higher cost output and thus provide the impetus for still further industrial expansion?

The National Industrial Recovery Act is the most momentous and revolutionary piece of legislation enacted in the annals of the United States, and possibly the world. If it succeeds it will write a new chapter in politico-economic history. As evidence of the absorbed interest with which this innovation is being observed, we quote from a paragraph in the July 8th issue of the *London Economist*. While we admit that our assumption is pure conjecture, we feel justified in crediting the authorship of this memorable article to Sir Walter Layton, the editor. The following comment is stimulating and provocative:

"Will the schemes for regulating output withstand the influences of higher prices on producers? Can consumers' purchasing power be kept up by minimum wage codes, and how far will America's foreign trade be destroyed by the protection which such codes may require? Can America achieve an inflation so unique in character and so well regimented that a slump will not occur when the stabilizing brake is applied? To all these questions there is no answer, and in its absence other countries—no matter how sincere their desire to witness a gradual and healthy recovery of world prices—are bound to be spectators of the American experiment, not participants."

Undoubtedly time will supply the answer to these queries—probably in less than a year to some of them. We might suggest, however, that the United States, in its present position and under its present leadership is better fitted to try the experiment than any other nation on the blame. In making this statement we lay emphasis on the co-operative psychology of the American people in their attitude toward this program. This reconstruction program—experiment—or whatever term may be applied—has been brought to its present state apparently with the

full consent of an overwhelming majority of our citizens. Such regimentation as we witness is largely voluntary. There is no similarity between the forces behind this movement and the iron control of Sovietsm, the Fascist regulations in Italy, and the Nazi regime in Germany. From all outward indications and with the exception of a skeptical minority, the heart of the American people is behind the Administration policies.

This co-operative attitude is a strong element in favor of its success.

If we were to point out any error in this scheme of planned economy, we would be inclined to question the psychology of laying the major emphasis on the cotton division of the textile industry as the bell wether of the recovery movement. We all know that costs will be increased in every productive line as a result of the restricted shift and the shorter work week, combined with minimum wage scales. This condition applies to all forms of manufacturing and processing, whether relating to food stuffs, rubber, metals and all kinds of manufacturing. Every type of productive enterprise must bear the increased operating cost, to say nothing of a heavier overhead. In the steel and automobile industries, as well as other lines, executives have submitted or are submitting codes for operations, hopeful of success, but fully aware of new burdens to be borne.

In the textile industry, however, in addition to the shorter work week and the minimum wage, the processing tax of 4.2 cents per pound must be shouldered. It seems to us unfortunate that this processing tax should be imposed when the exactions of the National Industrial Recovery Act have created new and untried working conditions. The textile industry has shown amazing recuperative powers, due to the under-stocked condition in finished goods that has prevailed. Nevertheless, it looks as if public and semi-official opinion in making a test of the textile industry had entered a stake horse in the economic Derby and insisted that he carry ten pounds extra weight over his competitors.

Of course, if the cotton division of the textile industry is successful in the face of this handicap, it will furnish an outstanding demonstration of the soundness of the general plan.

In all the doubts and misgivings over the ability of mass buying power to absorb industry's products at the higher cost, we see an impatient and perhaps fallacious emphasis laid on the necessity for devising schemes to increase employment. It seems to us that this attitude and these policies partly ignore certain powerful forces that must automatically and inevitably increase the purchasing power of consumers. These forces in their benev-

olent effect far surpass the emergency measures to which we have resorted, for they not only are more far-reaching, but they are more permanent in character. We refer to the astounding recovery that has taken place in the prices of commodities and securities since early in March.

If we will retrace our steps and look back at the moving causes of the depression that reduced world buying power to a poverty minimum and put millions on the unemployment roll, we will find that the initial impetus came from the decline in commodity prices. The warning signal of this catastrophic movement was furnished by the collapse of coffee prices in Brazil in the early autumn of 1929. It spreads to metals, rubber, silk, and then in spite of the attempts to bolster prices by the Agricultural Marketing Act and the Federal Farm Board, it laid its heavy hands on wheat, cotton and the agricultural products of the United States.

In the last analysis, commodities are not bought and sold in terms of money. Fundamentally they represent barter, and prices for one group of producers furnishes the buying power for the products of other groups. When sugar declined to a little over half a cent a pound, Cuba was reduced to Carlovigian poverty and could not furnish the splendid market for textiles from the United States that it supplied when it had a living price for its chief product.

It was in recognition of the power exerted by price levels and markets that the Administration undertook its program for the lifting of commodity prices in order to improve the buying capacity of the vast army of raw material and food stuff producers, with the assurance that this increase in purchasing volume would extend its constructive ramifications throughout all industry.

We might examine what has happened with respect to changed price levels since early March. In making our calculation we have taken the commodity price levels prevailing on July 17th, partly for their illustrative significance and partly because we see no reason why a two-day speculative reaction from the top should be permitted to invalidate them.

In the case of cotton, we have taken the estimated domestic carryover of 8,500,000 bales and a tentative crop of 12,000,000 bales, a total of 20,500,000 bales. Based on the prices prevailing March 3rd, we have a value of \$659,075,000, while the July 17th price level gives a value of \$1,178,875,000. In the case of wheat we have taken the carryover of 330,000,000 on July 1st, and the estimated crop of 495,000,000, a total of 825,000,000 bushels. For corn we have taken the carryover of 620,000,000 and an estimated crop of 2,384,000,000, a total of approximately 3,004,000,000 bushels. For oats we took the July 1st farm stocks of 203,000,000 and the estimated crop of 689,000,000, making a total of about 902,000,000 bushels.

A compilation of the supplies of wheat, corn, oats and cotton on the basis given above and taking the prices current March 3rd give a total of \$2,030,000,000. On the basis of July 17th prices, these commodities had shown an increase to a value of \$4,587,000,000, *an increase of more than two and a half billions of dollars.*

These price increases have not been confined to the agricultural products of the United States. On the basis of the July 17th level, the 1933 world supply of sugar of approximately 26,500,000 long tons, taking the December contract on the New York Sugar and Coffee Exchange as a yardstick for calculation, had shown a gain in value since March 3rd from \$953,000,000 to \$990,000,000. World copper stocks above ground had improved in price from \$76,000,000 to \$145,000,000. The world's rubber supply of 750,000 long tons had risen in value from \$53,000,000 to more than \$170,000,000.

If we should go through the list of the world's great staple commodities, we would discover that a price increment running into four or five billions of dollars had taken place since the new Administration in Washington imparted hope and faith in recovery by the constructive measures it has employed since it came into power.

Perhaps most important of all, in view of the nationwide holding of securities, has been the rise in the listed value of stocks and bonds on the New York Stock Exchange. In order to obviate possible criticism, based on taking maximum prices for the purpose of calculation, we have selected the change from the first of March to July 1st, which, according to a chart compiled by Dow-Jones, showed a rise of between \$17,00,00,00 and \$18,000,000,000.

It is almost impossible to measure the constructive ramifications of this tremendous gain in listed values. It should not be dismissed with a superficial sneer that this is merely the result of a Wall Street speculation. It means a huge appreciation in the capital assets of the country. Only a few months ago, practically the entire business and financial community was placing its estimate of security values solely on an earning power depleted practically to an irreducible minimum. Now it can take recognition of plant equipment and its productive power.

This colossal rise in security values has added enormously to the buying power of the nation. More than that, it has instilled confidence in the economic future of the country. For nearly three years, our people have had the liquidating complex. They have been striving to get out of debt or to reduce their obligations.

Now, with confidence in the future, they will be prepared once more to go into debt, reasonably fortified by the assurance that with the country moving toward mounting prosperity, they are incurring no more than a reasonable business risk. In addition to the buying power created by the rise in commodities and securities, we have the prospect, or at least the indication, of a resort to installment buying that will make an untold call upon the productive capacity of industry.

In the figures given above, we have pointed out the immense addition to potential buying power accruing from the great price rise of the last four and a half months. To those who take a hasty and superficial view of this phenomenon, it may look as if we were merely lifting ourselves by our bootstraps—that the rise in living costs will offset the beneficial effect of the buying power created by this upward price movement.

Although this counteracting influence may exert itself with the passing of time, it is not yet a factor for consideration. Living costs thus far have shown little change from depression levels. Rents, transportation, and services performed by public utilities have undergone no alteration. Foodstuffs have advanced a trifle, particularly in the case of perishable and semi-perishable products. Prices for clothing and countless household articles are still practically on the all-time commodity low. Cotton has advanced 100 per cent from the levels prevailing a year ago. Grey goods in the primary markets have shown still greater gains. Yet, one can go to the average retail establishment and buy shirts, underclothing, pajamas, and household linen for less than these same articles were selling at when cotton last year was hovering around six cents per pound.

The Department of Labor makes a compilation of living costs consisting of food, clothing, rent, fuel and light, house furnishing goods, and miscellaneous articles. On June 15, 1932, this index, based on the average prices of 1913, stood at 100.1. On June 15, 1933, this index stood at 96.7. In other words, the cost of living on June 15,

(Continued on Page 18)

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THE GREATEST NAME

IN RUBBER

GOODYEAR

Lowering Costs in Textile Plants With Graphic Instruments

BY A. M. MOSELEY

Engineer, Thomaston Cotton Mills, Thomaston, Ga.

WE can all remember the time when the wheels of industry were going day and night, in order to keep production up with demand. At that time we gave little thought to ways and means of cutting costs and increasing the efficiency of operation. Today, and perhaps for years to come, the problem is to hold the cost of production below the market price of the finished product. The problem in many cases is further complicated by the fact that many plants must be operated at less than normal capacity.

We are manufacturers of automobile tire cord and fabric, sheeting, fancy goods, fine broadcloth and yarns. There are five plants in the organization, having a total of over 2,700 motors, aggregating approximately 13,000 horsepower. Until recently we operated our plant equipment, studied our problems and took care of our maintenance by the traditional method. When a machine finally got in a condition where it was inoperative we repaired it; when a motor burned out it was rewound. When the power consumption was more than we imagined it should be, we kicked but paid the bill.

Something more than a year ago we inaugurated a continuous study of the operating condition of our machinery, a periodical check on the power consumption of individual machines, a study of machine performance with a view to reducing power consumed and maintenance required and to improve the overall operating efficiency of our equipment. Although we have accomplished results beyond our anticipation, we are not done yet, as we are continually discovering new places where we can improve the performance of our plants.

The secret of making these discoveries lies in the fact that the flow of current in an electric circuit fluctuates or varies with conditions, and by recording this variable flow of power, one is enabled to diagnose conditions, the existence of which would not be discovered. Many a man has applied for life insurance, thinking he was perfectly well, only to have the stethoscope or the microscope tell the examiner that he had heart trouble or a kidney disease. What these instruments are to the physician, the graphic meter is to the plant engineer.

We use Esterline-Angus graphic wattmeters and Universal Current Transformers, mounted on small, portable

tables which are fitted with wheels so that they can be easily moved about the plant. One of these tables in use is shown in the accompanying illustration. The wiring is permanent and self-contained. A drawer provides space for record charts and other accessories. When the records on the performance of a machine are to be made, the table is placed near the motor control box and the meter and transformers are connected in circuit by means of flexible leads.

We have found Esterline-Angus graphic instruments to be sturdy and rugged, exceedingly accurate and especially

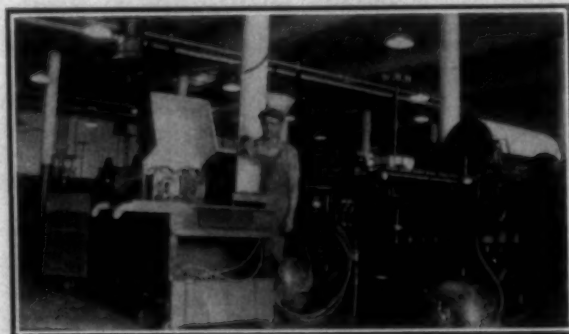


FIG. 1. This illustration shows the graphic meter and the auxiliary transformers, mounted on a portable table. The operator has just connected the flexible cables so that the power to the motor driving the machine flows through the meter, which makes a record of the machine performance so long as it is connected in the circuit.

adapted to survey work of this kind. In fact, much of the work we have been doing could not have been accomplished without instruments which make a continuous record, because the information comes from the shape or characteristics of the record on the chart.

It is obviously impossible to give in the space available a review of all the information we have obtained, covering power consumption, maximum demand, power factor, underloading and overloading of motors, friction losses, lubrication, effect of machine speeds on power consumed, operating conditions of machines, maintenance, etc. I

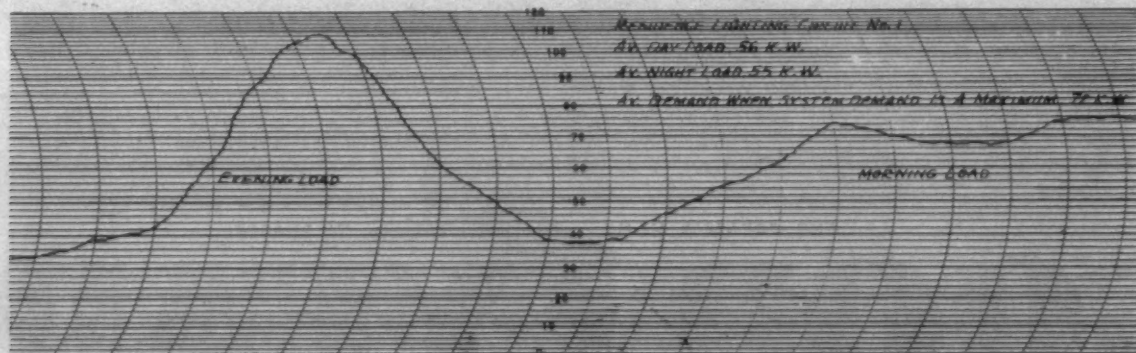


FIG. 2. This is a section of a chart from a graphic meter which recorded the power supplied to light the village homes. Note that the morning load was nearly as great as that in the evening, due to needless waste of current.

shall give one example of each of these different phases of the work.

MOTORS TOO LARGE

When we began our survey work the first test we made was the machine shop, used for repair and maintenance work. Here we found a 20-horsepower motor driving two groups of machines. One group runs continuously, the other occasionally. The record chart showed that a 3-horsepower motor would take care of the machines that run continuously, and that a 2-horsepower was the right size for the other group. With an expenditure of \$18.54 we cut the power consumption 10 per cent; raised the power factor 40 per cent; reduced the K.V.A. demand and released 15 horsepower of motor capacity for use elsewhere.

At other points we found a 50-horsepower motor carrying a load which was correct for one of 25-horsepower, and two of 75-horsepower that we replaced with 50-horsepower motors, and this condition was found to be quite common throughout the plants.

USELESS WASTE OF POWER

The company furnishes employees electricity to light their homes, and since no charge is made for this service,

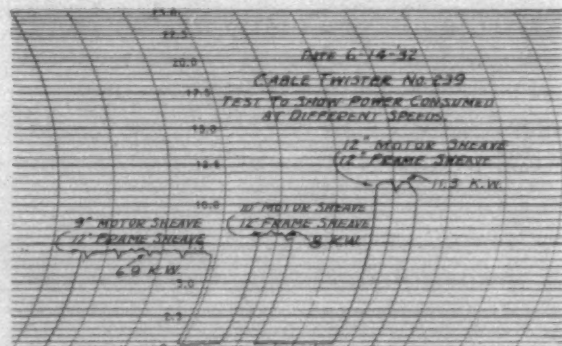


FIG. 3. To show the effect of spindle speed on power consumption, different sizes of motor pulleys were used to drive a cable twister, and this record shows the power required to drive the twister at these different speeds. Reducing the spindle speed one-fourth, reduced the power consumed to about one-half.

it is not metered. In the course of our survey, we placed a graphic wattmeter in one of the village circuits. The chart showed an excessive consumption of energy, the average being nearly 100 kilowatt hours per month per family. Investigation disclosed that many of the homes were being illuminated with extra large bulbs taken from the mill. The fact that the average night load was only a little higher than the average for the daytime, was found to be due to carelessness in turning off the lights during daylight hours, and excessive use of inefficient electrical appliances.

These faults have now been corrected to a large extent, resulting in a substantial saving in energy and a reduction in maximum demand as well. This illustrates how continuous losses find their way into organization practices and are likely to continue until brought to attention by some such means as a graphic meter.

MACHINE SPEED AND POWER CONSUMPTION

The speed at which textile machinery is operated has a direct bearing on the cost of the finished product. Increasing the speed beyond a certain point may increase the rate of output and at the same time increase the cost, paradoxical as that statement may sound. Let us consider what happens when the speed of, say, a twister frame is increased.

- The output increases proportional to the speed.
- The power required to drive it increases approximately as the square of the speed.
- Maintenance is increased.
- Supervision required is increased, reducing the number of machines one operator can properly supervise.
- Lubrication requirements are increased.
- The life of the machine is decreased.

As a result of the studies we have made, I am convinced that the quality of work can often be improved and the cost of the product reduced by actually reducing the speeds. Too many of us are buying an extra amount of power to tear our machines to pieces, while other machines stand idle. In boom times when there is work for every machine, operating at maximum speed may be justified, but there is no economy, in fact it is uneconomical to operate part of the equipment at top speed and let the rest stand idle. The most economical speed of course is that at which the cost of power, maintenance supervision, lubrication and replacements per unit produced is a minimum.

In an effort to adapt our plants to the conditions under which they have been required to operate during the past three years, we have been studying the relation between machine speed and these items of cost. In studying the relation of machine speed and power consumption, a graphic wattmeter was connected in the supply circuit of the driving motor, and by using motor pulleys of different sizes, the machines were operated at different speeds. From the wattmeter record the power consumed with the machine idle and loaded was determined.

The results show that as the speed is increased beyond a certain point, which is different for various types of machines, the power consumption rises much faster than the output of finished product. Taking cable twisters and forming twisters, for example, the meter records give the following results:

CABLE TWISTER

Construction 23s/5/3—35 min. before doff	
Spindle Speed	Power to Drive
2440	7 K.W.
2707	8 K.W.
3250	11.25 K.W.

At the time this test was run, a reduction in spindle speed from 3250 to 2440 R.P.M. on the cable twisters in use, meant a saving in power of more than \$4,500.00 per year. Experience has shown that at reduced speed an operator can supervise the additional machines required to make up for the reduced speed, because of fewer break-ages. The maintenance item is likewise less, so that the total cost of the product is lowered. For every type of machine there is a speed which is most economical, and so long as maximum output regardless of machine cost is not the paramount issue, this speed should be determined and used.

CHECKING UP ON MAINTENANCE WORK

When our fathers and mothers consulted the family physician, they told where it hurt, and displayed their tongues, as a basis for the diagnosis. Far too much maintenance work in textile mills at least, is yet of the "stick out your tongue" variety. Just as the modern physician uses the stethoscope and the microscope in his work, we now use the graphic meter to diagnose the ailments of our machines and to tell when we have them cured. One or two examples will suffice to illustrate my point.

Loom motors on certain sections kept running hot, with an occasional burn-out. Traditional methods of

maintenance suggested lubrication trouble, increased friction or some other cause of increased loading. The graphic meters, however, showed low voltage at the motor terminals and increased current, hence the heating. Running down the cause of low voltage we found switch contacts burned and reduced spring tension. Smoothing up the contacts and adjusting the tension cured the trouble.

IN THE WEAVING DEPARTMENT

I do not believe there is any division in the textile industry more in need of an insight into existing conditions than the weaving department. What is needed is some means of arriving at the point of maximum electrical and mechanical efficiency. The proper operation of looms is dependent upon loom fixers who usually have as many machines as they can keep going.

The usual procedure is to look at the loom, listen to it while running, shut off the power, turn the loom by hand and depend upon the "feel" for maladjustments. Very few give much thought further than to keep the looms turning out cloth, regardless of the loss of power and the wear and breakage of parts caused by improper settings and adjustments.

In order to consider these factors it is necessary to have some reliable means of charting the performance of the machine, and we find that the graphic wattmeter is admirably adapted to this purpose. What we do is to

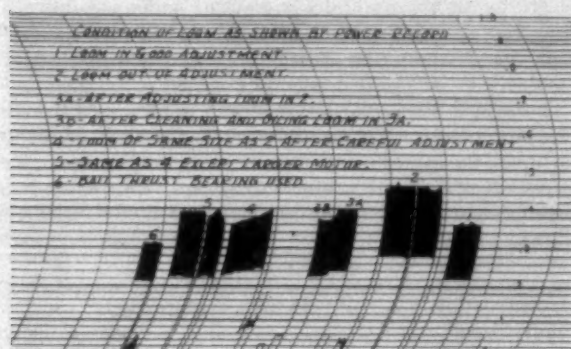


FIG. 4. The power curve of a loom gives a good idea of its operating condition. This chart shows the variation of the power consumption with different conditions of a loom.

connect a graphic wattmeter in the circuit of the motor driving the loom, and the power flow to the motor varies as the loom goes through its cycle of operation. The rate of power consumption gives an accurate indication of the mechanical condition of the unit.

The record reproduced in Figure 4 illustrates the data obtained in a recent series of loom tests.

(1) Is the record of a loom driven by a $1\frac{1}{2}$ -horsepower motor, with the machine in good adjustment, power load .58 K.W.

(2) This part of the record is from a loom of the same size, driven by a $\frac{3}{4}$ -horsepower motor. The load was .72 K.W., 16 per cent higher than in No. 1, which was found to be due to improper meshing of gears.

(3) The same loom as in No. 2; the gears were properly meshed, giving the first part (3a); by cleaning out stopped oil holes and lubricating the bearings, the lower power consumption (3b) was obtained.

(4) A loom of the same size was started and by making minor adjustments, the decrease in power consumed shown was obtained.

(5) This is a normal record of a loom in ordinarily good operating condition, driven by a $\frac{3}{4}$ -horsepower motor.

(6) One friction bearing was removed and replaced by a ball thrust bearing which cost \$1.00. The picking load was reduced more than 50 per cent, lowering the total load from .62 to .54 K.W.

The power saving alone on the individually motor driven looms in this weave room, due to this change, amounted to \$1,665.00 per year. The saving in power repays the investment of \$450.00 for ball thrusts every four months, a princely return of 300 per cent on the investment, to say nothing of the saving in maintenance due to the smoother operation by reason of the reduced energy applied.

It will be clear from this illustration that the record chart from the meter gives an accurate indication of operating condition. By knowing the kind of record which is obtained from a given kind of machine when in good condition, it is possible to spot machines that are in need of attention. In the same manner one can tell whether the proper repair work and adjustments have been made, before putting the machine into service again.

IMPROVED LUBRICATION

The friction losses of high speed machinery cannot be neglected. We have just shown how a change of one bearing resulted in a 13 per cent saving in power for the

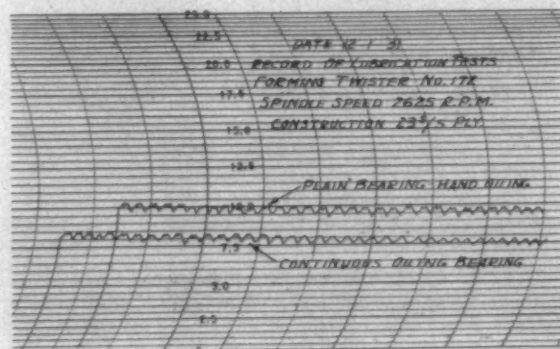


FIG. 5. Two tests of a forming twister are shown in this record chart. The upper curve, showing a power consumption of 10 K.W. was made with hand oiling. The lower curve, from the same machine, shows a power load of 8 K.W. with wick oiling.

entire machine. In Figure 5 is a record taken on a twister fitted with two different methods of lubrication. The upper record in Figure 5 shows the power consumed with ordinary hand lubricated bearings. After replacing these with bearings providing a continuous application of lubricating oil, the second test was made giving the lower record.

The average difference in the consumption with the two methods of lubrication is approximately 2 kilowatts. This shows clearly that the power consumption in a large textile mill can be reduced thousands of dollars per annum, by giving careful attention to the problem of lubrication.

There is yet much to be done, in fact we feel that we have only begun the refinements that are possible. From the work already accomplished we believe that by using graphic instruments equipped to give more rapid chart speeds, we may be able to determine the operating conditions of most textile equipment from the characteristics of the record chart. One thing is certain, we would not dispense with our Esterline-Angus instruments; they are invaluable tools for the plant engineer, because they give him an insight into actual conditions and eliminate opinion and guesswork.

Master Mechanics' Department

BY W. F. SCHAPHORST, M.E.

POWER IN THE TEXTILE MILL

Question 1—"Will it pay us to buy a steam turbine generating unit for producing our own power?"

Answer—This question can be answered only in a general way because so much depends upon conditions. It is not at all uncommon in modern textile mills for all power, heat and light to be obtained from a steam turbine. In some mills, during the night, power may be purchased from large central power stations because it may be too expensive to operate a turbine at night and waste all of the exhaust.

"The principal objection to steam turbines," says one executive, "is that we obtain too much heat from the exhaust and as a result more heat is wasted than would be the case if certain types of steam engines were used."

In general, though, the right kind of steam turbine in the mill may prove to be a real economy factor. And the use of steam and electricity from central stations or other plants is also recommendable in certain situations.

As most master mechanics doubtless know, central power stations are becoming larger and more efficient at a rapid pace. Steam pressures have suddenly jumped from 150 to 300, 600, 1,000, and even 2,000 pounds per square inch. Temperatures have advanced to the point where special metals are required in the pressure parts of the boiler and piping while carborundum and similar high grade refractories are necessary in the furnace walls.

Water cooled walls, combustion arches, powdered fuel, tapered and flexible baffle walls, soot blowers, superheaters, deconcentrators, and a multiplicity of other refinements have materially increased the efficiency of textile mill power plants.

Modern steam turbines and electric generators have grown to sizes that twenty years ago, were called impracticable. Naturally, most of these improvements have been seized by the central stations, resulting in power at lower cost to the consumer and greater profit for the operator. Of course these improvements in equipment are likewise applicable to and beneficial to the smaller plants such as textile mills. But on the whole the advantage to the large plants is greater.

Therefore one of the live questions of the day among textile mill executives is, as given in one form above, "Will it pay us to generate our own power or is it cheaper to buy it from a central station?"

The answer always has been and still is, "It all depends upon conditions, but in general, particularly for large plants, the answer is 'Yes.'" Ten years ago a given plant probably paid while today it doesn't pay. Or, possibly, it will pay today while ten years ago it didn't pay. Conditions don't alter uniformly in every department of a textile mill. Improvements do not spread out evenly. This makes a separate problem of every case which must be studied and decided on its own merits. One must have a full knowledge of all conditions.

It is evident that the central power station of today is symbolic of "mass production" when compared with the small textile power plant. For example, it is estimated that in a 20,000 K.W. central plant the labor cost is only \$5.35 for K.W. year, whereas in a 100 K.W. plant the labor cost is about \$40 per K.W. year. The former is only about 13 per cent of the latter.

In general it may also be said that the first cost of the central power station is considerably less than that of the smaller. Thus a small 30 K.W. textile plant may cost about \$9,000, or \$300 per K.W., whereas a 5,000 K.W. central station costs about \$120 per K.W. and a 50,000 K.W. plant about \$70 per K.W. The larger the plant the lower the first cost per K.W.

Therefore it is obvious that conditions in the textile mill must be "different" or successful competition against the central power station will be impossible.

Such conditions do exist, not only in textile mills but in numerous other industries. A large book would be required to do full justice to this important subject. It cannot be done in a few pages. But it is a fact, as most master mechanics know, that textile mill power plants are successfully competing with central stations.

In general there are three days in which a small power plant can beat the central station, as follows:

1. Where heat is usable at low temperatures—at the temperature of exhaust steam, as in textile mills.

(Continued on Page 12)

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PERSONAL NEWS

A. I. McDonald has resigned as superintendent of the St. Pauls Cotton Mills, St. Pauls, N. C.

B. H. Bridgman is now general overseer of weaving, Gainesville Cotton Mills, Gainesville, Ga.

B. M. McGee has become second hand in weaving, Gainesville Cotton Mills, Gainesville, Ga.

Wade Henderson has been promoted from second hand to overseer carding, Arcadia Mills, Arcadia, S. C.

A. W. Whitmire is now section hand, night carding, Gainesville Cotton Mills, Gainesville, Ga.

Geo. B. Moore, of Arcadia, S. C., is now superintendent Gainesville Cotton Mills, Gainesville, Ga.

V. U. Johnson is now second hand in carding, Gainesville Cotton Mills, Gainesville, Ga.

J. A. Jackson is now overhauler, Gainesville Cotton Mills, Gainesville, Ga.

J. W. Morrison has been promoted from second hand to night overseer carding, Gainesville Cotton Mills, Gainesville, Ga.

Chris Suber, Jr., graduate of the Clemson Textile Department of the class of 1931, has recently accepted work with the Gossett Mill, Anderson, S. C.

J. T. Jones has been transferred from overseer of carding at the Marlboro Mills, McColl, S. C., to a similar position with the plant at Bennettsville, S. C.

George Horne, formerly second hand at the Park Yarn Mills, Kings Mountain, N. C., has become overseer of spinning at the Lockmore Mills, York, S. C.

G. G. Harmon has been promoted from overseer carding at the Lois Mills, Douglasville, Ga., to overseer carding and spinning at the Martel Mills, Lexington, N. C.

R. M. Ross has resigned as overseer carding and spinning at the No. 2 mill of Clyde Fabrics, Inc., Newton, N. C., to become overseer carding at the Hickory Spinning Company, Hickory, N. C.

A. N. Bozeman, Clemson textile graduate of the class of 1931, who was connected with the Dunnean Mills in Greenville, S. C., was recently transferred to the New York office.

P. M. Parrott, Clemson textile graduate of the class of 1933, has recently gone with the Ralph E. Loper Company. He was formerly with the Judson Mill, Greenville, S. C.

Frank Barnes, overseer spinning, J. H. Burgess, overseer weaving, J. E. McQueown and Mr. Bolinder, all of Molohon Mills, Newberry, S. C., are attending the Exposition at Chicago this week.

J. B. Meacham, who for some years has been manager of the Atherton Mills and the Insulating Yarn Co., Charlotte, has resigned to become superintendent of the St. Pauls Cotton Mills, St. Pauls, N. C.

E. C. Gwaltney has resigned as vice-president and general manager of Morgan Cotton Mill, Laurel Hill, N. C., to accept a position with Bibb Manufacturing Company at Macon, Ga. His position at Laurel Hill has not yet been filled.

D. L. Tate has resigned his position with the Burlington Mills, Burlington, N. C., and accepted the position of overseer of weaving at the Albemarle Weaving Company, Charlottesville, Va.

George T. Putnam, of Charlotte, Southern manager for the Rome Soap Manufacturing Company, Rome, N. Y., is on a brief business trip to the home office and plant of his company.

Will White has been promoted from second hand in spinning to overseer of spinning, twisting and winding on the second shift of the Lockmore plant of Textiles, Inc., York, S. C.

E. M. Holiday has resigned as overseer finishing at the Tupelo Cotton Mills, Tupelo, Miss., to become general agent at Tupelo, Miss., for the Intercity Trucking Company, of Memphis. He has also become a partner with A. L. Whetstone in a restaurant at Tupelo.

D. D. Thompson, of Belton, S. C., has accepted the position of overseer of spinning at the Calhoun Mills, Calhoun Falls, S. C., succeeding W. K. Waitts, who has taken a similar position at Goldville, S. C., as reported last week.

R. L. Lee, Jr., Clemson textile graduate of the class of 1925, who has been at Lowell, Mass., on a fellowship with the Textile Foundation during the past year, will return to Clemson to resume his duties as assistant professor of Carding and Spinning, in September.

C. J. Jarrell has been promoted to overseer of the cloth room at the Spofford Mills, Wilmington, N. C., and not to overseer of spinning, as reported last week. J. R. Turner is overseer of spinning there, having satisfactorily filled that position for the past four years.

George L. Dozier, graduate of the Clemson Textile Department of the class of 1931 and formerly in charge of the laboratory at the Union Bleachery, Greenville, S. C., recently received a promotion in the general plant work of the same company. A. G. Fisher, Clemson Textile graduate of the class of 1933, who has been on a Textile Foundation Fellowship at Clemson during the past year, was placed in charge of the laboratory work after Mr. Dozier's promotion.

Bill Moore Returns South

W. M. Moore, for many years connected with the Southern sales offices of the Allis-Chalmers Company, with headquarters at Charlotte, but who has been Western sales manager for the Allen-Sherman-Hoff Company, Chicago, for the past several years, has resigned that position to go into business for himself at Atlanta. He is representing the Detroit Stoker Company in North and South Carolina, Georgia and Alabama, and the Ric-Wil Company, Cleveland, Ohio, makers of underground conduit systems in the Georgia territory.

"Bill" has hundreds of friends among Southern textile men who will be interested to know that he has returned to the Southern territory.

Ga. Tech Graduates Are Placed

F. C. Runge, a graduate of the textile co-operative course, class of 1929, has been made superintendent of Compania Ariguanabo, Cajo de la Rosa, Hoyo Colorado, Cuba. He was formerly overseer of dyeing and finishing in this mill, weaving chambrays and denims for the local Cuban market. Recently spinning equipment has been installed to enable this plant to produce its own yarns.

Garland Embry, Jr., class of 1931, is in the Design

Department of the Burlington Mills, Burlington, N. C. Previously he was with the Choccolocco Cotton Mills, Anniston, Ala.

J. C. Conniff, class of 1932, has been transferred from Bradford Cotton Mills, Montgomery, Ala., to the New York office of Hesslein & Co. He is sales agent for the mill.

H. R. Brock and J. C. Moore, class of 1932, are with the Trion Company, Trion, Ga.

F. F. Lester, class of 1932, is with the Hartsville Print and Dye Works, Hartsville, S. C.

Graduates of the present class of 1933 who started work shortly after the end of the school term in June include the following:

C. A. Beall, Jr., W. S. Barefield and L. M. Thompson are with Bibb Manufacturing Co., Columbus, Ga.

A. D. Zellner is with the Hartsville Print and Dye Works, Hartsville, S. C.

J. E. Nash is with the Bradford Cotton Mills, Montgomery, Ala.

L. Sudderth, Jr., will be connected with dyeing and finishing department of Standard-Coosa-Thatcher Company, Rossville, Ga.

Cotton Manufacturers Ask Tax on Rayon

A processing tax of 8.4 cents per pound on rayon yarns, to compensate for the 4.2 cents tax on cotton, was asked by cotton manufacturers at a hearing before Farm Administration officials in Washington. The hearing began Monday.

Rayon representatives stated that no tax at all was necessary to compensate the cotton men for their tariff.

The processing tax on cotton, applicable on the first processing of lint cotton toward its finished state is a part of the program to raise the price to the grower. Beginning August 1, it is effective not only on cotton manufactured in the future but on stocks by factories and wholesalers. Retailers have 30 days to dispose of stocks on hand.

The hearing was the first step toward determining whether a levy on products that compete with cotton is necessary to prevent the staple from being put at too much of a disadvantage or as farm officials put it to prevent "excessive shifts in competition."

The proposal for the 8.4 tariff on rayon was made by S. Robert Glassford of New York, chairman of a cotton textile institute committee, after he had previously urged a compensatory tax on certain types of paper products.

Glassford said rayon had too much of an advantage as things stand at present, contending the cost of a finished cotton product is one-third material and two-thirds labor but that the ratio is reversed in the case of rayon.

Rufus W. Scott, of the Rayon Synthetic Yarn Manufacturers, New York, said no levy was needed on rayon and that only about one-third of the 150,000,000 pounds of rayon consumed annually had any relation to cotton at all.

Glassford had support from Norman Elsas, of Atlanta, president of the Fulton Cotton Mills, although most of his argument at the hearing, opened by Charles J. Brand, assistant farm administrator, was that a tax was needed on "kraft" and "rope" papers used in the making of bags which compete with cotton containers.

Seabury Stanton, representing the National Rayon Weavers' Association, backed Scott's argument by saying that the total consumption of rayon if translated in terms of cotton, would mean only about 250,000 bales. He said the two fabrics did not compete and that the question was one of "style and consumer acceptance."

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Master Mechanics' Department

(Continued from Page 9)

2. Where process exhaust steam may be used to operate an exhaust turbine.

3. Where direct current is preferable to alternating current—often the case in textile mills.

A bleeder turbine will overcome, often entirely, any objections to turbines. For example, I have in mind a combined mixed flow and bleeder turbine in a plant which uses large amounts of both steam and hot water. The numerous variable in the plant made it difficult to strike a heat balance with a straight non-condensing turbine alone, or with one non-condensing turbine and one condensing turbine, and this explains why a combined mixed flow and bleeder unit was installed.

I have in mind another installation in which a geared turbine drives a direct current generator of 600 K.W. and an alternator of 500 K.W. The alternator is synchronized with the mill A.C. power lines, and by acting as a generator makes it possible to load the turbine so that the proper amount of exhaust steam is produced. The turbine runs at 3,600 R.P.M., while the generators are standard speed machines of 900 R.P.M. Steam pressure is 175 lbs. gage, with 100 degrees F. superheat, while the exhaust pressure varies from 5 to 15 lbs. gage. The steam required for drying in this plant varies considerably and this equipment is found to be very flexible, the exhaust of the turbine as now arranged being sufficient under almost all conditions.

Large central power stations themselves sometimes install comparatively small steam turbine units for generating direct current rather than go to the expense of converting from A.C. to D.C. I know of one such installation, for instance, where it is claimed that these smaller turbines, exhausting to their own condensers, give as good economy as that obtained from the main alternating current bus by using transformers and converters, besides saving the cost of step-down transformers and circuit breakers which would have been required for a connection between the auxiliary system and the 120,000-volt station bus. In any plant the use of direct current offers marked advantages because of the greater flexibility of direct current motors, particularly where machinery must be started under heavy loads. To obtain direct from an A.C. distribution system, it is necessary to install a motor generator, rotary converter, or some other form of rectifying apparatus, which involves not only considerable complication, but also appreciable losses of energy, so that all or more than all of the superior efficiency of the large central station generating units disappears in transmission losses in lines, transformers, motor generators, etc. Direct current power can be generated by comparatively small units and often with less consumption of steam and fuel.

Small steam turbines have also been brought to such a high degree of refinement that they sometimes actually compete with the larger turbines as well as with large reciprocating engines. For example, in some recent cases more than 200 million foot pounds of work per 1,000 pounds of steam is being guaranteed. This is as good or better than the best results ever obtained with the most highly developed triple expansion crank and fly wheel pumping engine. In fact it is believed that the turbine end of a geared turbine driven centrifugal pumping unit is more efficient than the steam end of the triple expansion reciprocating unit of the same overall efficiency.

These highly efficient multistage turbines have been adapted to the use of modern high steam pressures and high superheat. They utilize the utmost in vacuum. For industrial plants where they operate in connection with heating systems, or industrial processes, they are also adapted for the so-called "bleeding" of steam at one or more pressures. Or, they operate on exhaust steam from other units. Or they do both, having automatic governing devices by means of which these actions take place as required to hold the desired pressure or temperature conditions in the intermediate pressure steam using devices.

A CHIMNEY PROBLEM

Question 2—"We have a steel chimney 60 feet high and 48 inches diameter which we fear is too small to handle 1,200 boiler horsepower. Oil firing. Altitude 3,000 feet. It is suggested that we install a blower instead of building a new chimney or an addition to the present one. How much steam would the blower require?"

Answer—Even for oil firing, a chimney 60 feet high by 48 inches diameter is inadequate for 1,200 boiler horsepower. In fact, the actual rating is under 300 H.P.

Thus, if by the application of forced draft, the capacity of the chimney were increased 200 per cent, you would still be considerably below the boiler rating. I do not believe this existing chimney can handle much more than the gases from 600 to 700 H.P.

If you want full boiler rating, it would seem that a new chimney will be in order. However, if the present natural draft output is not too far below your actual requirements, perhaps the application of a blower system would make up for the additional requirements, and even give them some reserve.

You do not furnish any figures on the amount of oil

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Similar reduced round trip fares will also be in effect Sept. 1st, 2nd, 3rd; October 6th-7th, and November 28th and 29th, 1933.

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being consumed at present, but I would be surprised if you are obtaining more than 300 H.P. Thus, if by the application of blowers you could get, say, 600 H.P., this might solve your difficulties, even though your boilers are good for 1,200 H.P.

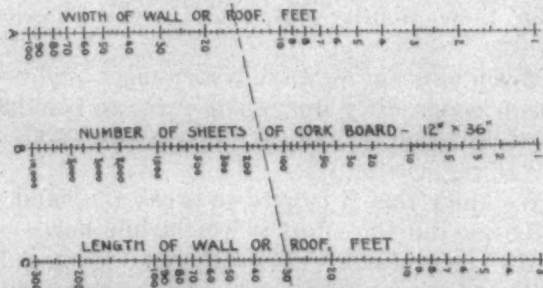
A first-class turbine-driven blower, to give 600 H.P., would probably cost less than \$500.00 completely installed and piped. If more than one boiler is to be equipped, the price might run \$300.00 to \$350.00 per boiler completely installed.

In the absence of any steampressure data or other figures, you might estimate roughly, 3 per cent of the total steam generated to be used for blower service. If the exhaust steam from the turbine which incidentally is pure, can be utilized for heating the buildings or feed water, the heat balance would be improved by the amount used.

CORK ROOF INSULATION

Modern textile mill designers recognize that correct building design must include insulation. The heat transmitted from uninsulated roofs in the winter results in a needless loss, the cost of which comes to a staggering total.

In the summer, these same roofs absorb a tremendous amount of heat and deliver it to the rooms below, thus causing discomfort to, and impairing the efficiency of, people who are working in these areas. In certain textile plants where the humidity and often the temperature must be governed at a high point, due to the processes of manufacture, an uninsulated roof will inevitably chill the air in its vicinity during the winter months to the point where some of its moisture condenses and forms what is commonly known as "ceiling sweat." The moisture drops to the floor, producing a most annoying condition to people who are working in the room and often causing damage to property, since it will drop upon any materials and machinery that may be underneath. The loss due to condensation must be considered separately from the direct loss due to heat leakage through the roof, the latter being present in all uninsulated construction while the former appears only when the humidity is



relatively high or when the difference in temperature between the inside of the roof and the room is of considerable magnitude.

Many mill roofs are already insulated with cork board, which is an excellent material for the purpose because of its low heat conductivity, resistance to fire, and structural qualities. The standard size of cork slab most commonly used is 12 inches by 36 inches, consequently that size has been made the basis for the accompanying chart, Fig. 1. It shows, in an instant, the number of standard sheets of cork board required on any roof.

To show how the chart is used let us take this example: If a given roof is 15 feet wide and 30 feet long, run a straight line through the 15, column A, and the 30, column C, and the intersection of the line with column B instantly shows that 150 sheets of cork board will be required. The dotted line drawn across the chart shows how this particular problem is solved.

Although the chart appears to be limited to widths of 100 feet and lengths of 300 feet it really has no limit whatever. Thus if the width of the wall should be as great as 1,500 feet and the length 3,000 feet, the same dotted line would tell us that 1,500,000 sheets of cork board will be required. The rule is, where ciphers or digits must be added: Add as many ciphers or digits to the answer in column B as the sum of the added digits or ciphers in columns A and C. In the above problem two ciphers were added in column A and two in column C, making a total of four ciphers to add in column B. Ex-

(Continued on Page 18)

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TEXTILE BULLETIN

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Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

A Natural Situation

No matter whether a mill man does or does not like the Textile Code and no matter if he resents the imposition of the processing tax, he should realize that for the present the industry operates under both and that he has a selfish interest in making it operate as smoothly and as successfully as possible.

In anticipation of the advance in prices which would result both from the Textile Code and the processing tax there was enormous buying of cotton goods during May and June and a part of July and a considerable portion of the purchases were in anticipation of future needs. Some of the buying was purely speculative and such goods are to be offered in the market when they will show a profit to the speculators.

It is human nature to buy heavily when there appears to be a certainty of an advance in price but few people will buy except from hand to mouth when the advance has taken place and there are no indications of still higher prices.

It is entirely logical that there should, at this time, be a period of extreme quiet in cotton goods markets because most of those who needed cotton goods or expected to need same have anticipated their requirements.

Those who must buy goods at prices which probably average 80 per cent above those which recently prevailed, are buying in as small quantities as possible because the ability to get the public to purchase goods at the new prices, has yet to be demonstrated.

Fortunately for the mills, there have been three years of subnormal buying by the public and millions of our people have reached the point that they must buy some clothing no matter what the price.

It may be that during the next sixty days or-

ders will be few and of small volume and that some mills will be forced to cut off one shift or run every other week but we do not think that any such curtailment should be a signal for a wave of pessimism or price cutting.

Now that we are under the Textile Code we should give it a fair trial and we should realize that there must be a period during which resistance to price advances by the public plus the excessive forward buying of the last few months may prevent a continual flow of new orders to mills.

The thing to watch is the progress of retail buying because if the public buys in large volume from the retail merchants, orders will eventually come through to the mills.

Fortunately retail buying seems to be upon a very large scale and to be increasing. We have been carefully observing reports and statements from many small towns and they seem to indicate a volume of buying by the public which will eventually mean ample cotton goods orders for the mills.

We urge patience and co-operation during this period when orders may be scarce and when curtailment may be necessary.

Nothing can be gained now by complaining or by spreading pessimism, although that has become a habit with many mill men and can almost be said to be their chief pleasure.

Operation under the Textile Code must be given a real test and if there be those who suffer while the test is being made, they should keep their mouths closed and await developments.

When nine out of ten mill men meet buyers of cotton goods, they immediately try to convince them that they would be fools to buy goods at prevailing prices.

We know that it is hard to break the habit of a lifetime but the effort is worthwhile now.

Mill men should sit steady and keep quiet while watching retail buying and the progress of the consumption of cotton goods.

Mule Trouble

A good many cotton farmers are having mule trouble. The "jarheads" may have plenty of horse sense, but they are unable to see any sense in plowing up the cotton crop. The mules are up in arms, or whatever mules get up in when they are riled. Anyway, they are balking at trampling down the cotton stalks, so the plows can turn them under. No self-respecting mule, trained to walk between the cotton rows, is willing to walk through a cotton patch with his shoes bearing down on the growing plants. Its against

mule nature. They are balking and kicking about it and rolling their eyes around to ask what it is all about.

Perhaps we may look forward to a general mule strike. This plowing up cotton business seems to be a violation of their code.

We always heard that if a man wanted to train a mule, he had to have as much sense as the mule. This brings up the question of whether—but why go on with this?

Private Estimates

This is the hour of private estimates of the cotton crop and we wish to again warn cotton manufacturers against being influenced by any of them.

The following is the record of the leading private cotton estimates as made about August 1st, 1931:

J. E. Bennett & Co.	13,325,000
Clement Curtis Co.	13,981,000
E. J. Schwabach Co.	14,133,000
Fairchild Bureau	14,327,000
Fossick Bureau	14,150,000
Geo. H. McFadden	14,218,000
Am. Cot. Crop Service	13,456,000
Proctor & Gamble	13,750,000
Commercial Appeal	14,177,000
Cochran Bureau	13,977,000
N. Y. Cot. Exch. Mbrs.	13,813,000
GOVERNMENT	15,584,000
Final Crop	17,060,722

With the uncertainty about the amount of cotton land plowed up we believe that even less attention, than usual, should be paid to private estimates.

Short Selling

The crash in the stock and commodity market last week has been attributed to organized short selling and has revised talk of legislation to restrict same.

We have no evidence that there was organized short selling but the following comment upon short selling made by Mr. Perkins in a book, "Short Selling—For and Against," by Perkins & Whitney, will prove interesting:

I am sincerely and definitely of the opinion that *short selling has been a major cause of the prolongation and intensification of the depression*; that it is an unnecessary sale, being neither forced nor from a desire to change investment, but solely to make a profit from the expected decline.

The weapon used by the short seller is the best the wit of man could devise to accomplish his purpose. *It is a secret, artificial inflation of the selling supply to overbalance the buying-demand and bring declining prices in accordance with the well-known effects of the laws of supply and demand.*

No other sale has such a motive, requires such an opportunity, offers such a temptation or creates such an

inflation, whether of a crop to be planted, a product to be made or a house to be erected. In all other sales the seller makes his profits in the sale, without any regard to repurchase and wishes his customer all the luck in the world with the thing sold. *It remains for the short seller alone to seek his profits from a loss to the purchaser, to require a victim whom he must put in a hole and keep there until the desired regard can be obtained.*

Wherever he appears the short seller is an opportunist, dominated by the greed for gain.

If he is a large operator, he will employ some carefully selected propagandist to circulate all sorts of rumors, true and false. Even without a propagandist to circulate all sorts of rumors, *if he can drive stock down spectacularly, Wall Street itself will manufacture rumors galore.* It is one of the evils of Wall Street speculation that these rumors crop up from all sorts of unknown sources in both bull and bear markets and mislead a great many innocent people.

And you thus realize what a mighty engine for destruction of market values short selling is through its artificial magnification of selling-supply to overbalance buying-demand.

Textile Schools Make Good Records

We are very much gratified to know that practically all graduates of the textile schools in the South have already secured positions either in the mills or in the allied industries. The placing of these young men in the industry speaks well for the work that the schools are doing and for the records that have been made by textile graduates in recent years.

We can remember when practical mill men saw little value in a textile education. Many of them felt that it was a pure waste of time and that no textile school could help a boy learn the mill business. Fortunately that point of view has given way to the recognition that technical training and actual mill experience makes a splendid combination for producing efficient mill men.

We have been interested to note that in recent years, many superintendents who were themselves denied an opportunity to go to college, have sent their sons to textile schools before putting them in the mills.

A long list of textile graduates are now holding high positions in the mills and we expect to see this list increase in the future.

Right now the Textile Foundation is working to improve textile education by finding out from the mills just what type instruction the textile student needs. When this work is completed, the courses offered in the textile schools will be more valuable and more practical than ever before.

We hope that the mills will co-operate in seriously giving the textile schools their own ideas of what the textile student should be taught. It will be helpful to everyone concerned.



Stanley Eversafe -- the name of a better Bale Tie System

Even the most critical executive cannot help admitting the logic of changing to Stanley Eversafe in view of advantages like these:

1. Stanley DS Seals make stronger joints than any other type of seals.
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5. Made of Stanley Steel, Stanley Eversafe Ties are of uniform gauge and tensile strength to insure the greatest efficiency.

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Many minor cuts, digs and scratches, generally unreported, slow up tying operations. Round Safety Edges and Ends on Stanley Eversafe Ties prevent such injuries and speed up operations.

Your Firm's Name, Trade Name, Trade Mark, Slogan, Warnings and Special Designs can be had printed continuously on Stanley Colograph Ties.

Stanley EVERSAFE Bale Ties and Seals

MILL NEWS ITEMS

YORK, S. C.—The Lockmore Mills are now engaged in reclothing 18 cards, 21 sets of slats and 15 doffers. Card clothing was purchased from Jos. Sykes Bros.

HARTSVILLE, S. C.—Hartsville Cotton Mills started full night operations recently, giving employment to 250 additional people.

GAFFNEY, S. C.—Work is progressing nicely on painting of 200 mill houses in the villages of Hamrick and Limestone Mills. Contract was let to Tom Coyle, local contractor.

GAFFNEY, S. C.—The Limestone and Hamrick Mills are installing 32 spinning frames and 12 speeders in their mills here.

ROME, GA.—A large warehouse is being constructed at the Primrose Tapestry Company and many other improvements are being made to the mill. Twenty additional looms are being installed.

MARION, N. C.—The initial equipment of the W. P. Elliott Knitting Mill includes 32 300-needle Scott & Williams B-5 machines, eight ribbers, five loopers and the finishing machinery.

ROSSVILLE, GA.—The National unit of the Standard-Coosa-Thatcher Company, Chattanooga, Tenn., is constructing a one-story addition which will be used for storage and distributing goods. It will cost approximately \$14,000.

CHATTANOOGA, TENN.—A warehouse building at the Central Franklin Processing Company plant is being constructed. It will represent an investment of about \$7,500, an official of the company said. Several manufacturers have started minor programs. There are also several large textile projects underway.

LINCOLNTON, N. C.—C. H. Harril has been awarded the contract by the Rhodes-Rhyne Manufacturing Company for the erection of a two-story annex to the present mill. The annex will be used as a weave room to consume the yarn made by the mill. It will be 61x83 feet and will be built of steel and brick. Work will start at once and completion is looked for within 60 days.

CHATTANOOGA, TENN.—Estimated increases in earnings of operatives of the underwear manufacturers lining up with the National Industrial Recovery Act this week will range from 10 to 20 per cent. These manufacturing plants are the Signal Knitting Mills, Chickamauga Knitting Mills, Ilena Mills, Rivoli Mills and the Volunteer Knitting Mills. These mills are now operating on a 40-hour-a-week basis, with a \$12 minimum wage.

ATHENS, TENN.—H. A. Vestal, at the annual meeting of the stockholders of the Chilhowee Mills, was re-elected president and general manager of the plant. E. L. Wilson was re-elected vice-president and Miss Marie Kinser re-elected secretary. Besides the officials the directors include H. P. Smiley, E. B. Madison and G. F. Lockmiller, of Athens, and O. A. Knox, of Cleveland, Tenn.

MILL NEWS ITEMS

FAYETTEVILLE, N. C.—Puritan Fabrics, Inc., has been incorporated here by J. Spencer Love, head of the Burlington Mills, Burlington, W. J. Carter and E. H. Wilkins, also of Burlington and also executives in the Burlington group. The new charter makes no change in the operation of the mill but consists of a change in the charter of the Puritan Weaving Mills, which have been under the Burlington Mills control for some time.

CARTERSVILLE, GA.—Cartersville Mills, manufacturers of knit underwear, have planned a large addition to their finishing room space and also to their boiler room. Contracts have been let and additional machinery purchased, it is stated by John Fletcher Fowler, vice-president.

The Cartersville Mills now employ more than 400 operatives and increases will be made in the force when the new additions are completed during the next five to six weeks, it was stated.

ELIZABETH CITY, N. C.—The entire full-fashioned hosiery plant of Brumbach and Miller at South Temple, Pa., has been purchased by C. O. Robinson and is being brought bodily to Elizabeth City where it will be added to the equipment of the Avalon plant of the Elizabeth City Hosiery Mills.

The new equipment consists of 10 full-fashioned machines, as compared with 16 in Avalon Mill as it now stands. This should mean an increase in the number of operatives from 78 to around 120. These operatives are among the best paid workers in the city.

The auxiliary equipment of the newly purchased machines has already been trucked to Elizabeth City.

The installation of this new equipment must await enlargement of the Avalon mill, which in order to make provision for future as well as immediate growth will provide space for eight machines in addition to the 10 that have just been purchased.

State Textile School Aids in Mill Problems

During the past year the Textile School of North Carolina State College has rendered a distinct service to Southern mills by aiding in over 50 problems submitted to them by a number of different mills.

These problems included the analysis of yarns for size, tensile strength and staple of cotton; determination of the cause for lack of crimp in a seersucker sample; determination of the amount of moisture in samples of cotton yarns; determination of the cause of streaks in fabrics, and many other carding, spinning and weaving problems.

Chemical and dyeing problems included comparative tests of starches, qualitative analysis of softeners; analysis of water and caustic soda; determination of the comparative fastness of special dyes on acetate yarns; determination of the effect of a soap compound on samples of cloth, and a number of tests to determine the emulsification and penetration of oils.

In addition to the solution of these problems, members of the Textile School faculty spent many hours in consultation with mill officials in order to aid them in the solution of their individual problems.

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HARTFORD, CONN.
SOUTHERN OFFICE, GREENVILLE, SOUTH CAROLINA

Master Mechanics' Department

(Continued from Page 13)

periment with the chart for a few minutes and you will soon appreciate its simplicity and value.

RICKETY TRANSMISSION

Not long ago I was invited to visit a textile mill in one of the New England States.

What impressed me most, on looking over this textile mill, was the home-made transmission equipment which certainly wasn't efficient. Hangers were built entirely of wooden two by fours, nailed together. Each hanger creaked loudly, and each one creaked in a pitch all its own, out of harmony with the others. Fortunately the shafting didn't run at high speed or the noise would have been unendurable. Even as it is I am sure this small New England factory is far noisier than other factories many times larger.

SALE OF LOWE MILLS, INC.

Notice is hereby given that the undersigned, A. F. Mullins, Jr., of Shelbyville, Tennessee, will sell at public auction, at the office of Lowe Mills, Inc., at Huntsville, Alabama, on the 23rd day of August, 1933, at 3:00 o'clock P. M. (Eastern Standard Time) on that day, for the account of whom it may concern, the real and personal property of Lowe Mills, Inc.

Lowe Mills, Inc., owns, free and clear without encumbrances of any kind, a cotton mill at Huntsville, Alabama, known as "Lowe Mill," with 28,672 spindles, 660 looms (Drapers), 420 of these looms being less than five years old, with individual motor drives. The mill is supplied with Barber-Colman high speed Spooler and Warper equipment, and is located at Huntsville, Alabama, in the fertile Tennessee valley, the textile section of northern Alabama. Among the other mills at Huntsville, Alabama, are the mills of Merrimack Manufacturing Company, Dallas Manufacturing Company, and Lincoln Manufacturing Company. The territory is supplied with cheap power and the promise of still cheaper power through the government development of Muscle Shoals. The mill is furnished with preparatory equipment for the production of print cloth yarns for book cloth and shade cloth, with 100 looms equipped for marquisettes, and has buildings with vacant floor space sufficient for additional 10,000 spindles without rearrangement of present equipment; two main brick mill buildings, warehouses; agents' residences; office and store buildings, and 172 operatives' houses.

For detailed statement of the property, including machinery and equipment, description of real estate, and terms of sale (to be read at the time and place of sale) kindly address Donald Comer, Esq., 58 Worth Street, New York City.

Inspection by interested parties is invited, and the undersigned, Mr. A. F. Mullins, Jr., who is in charge of the property, will be glad to show it to interested parties at any time. It is suggested that prospective buyers communicate with Mr. Mullins and arrange to visit the property.

The successful bidder will be required to pay 10% of the purchase price in cash at the time and place of sale, 15% of the purchase price in ten days' time thereafter, and the seller will accept the purchaser's note for the balance of the purchase price, payable in three equal installments of ninety days each, secured by a mortgage on the property.

The seller reserves the right to bid at the sale.

This 22nd day of July, 1933.

A. F. MULLINS, JR.

SALE OF SHELBYVILLE MILLS CO.

Notice is hereby given that the undersigned, A. F. Mullins, Jr., of Shelbyville, Tennessee, will sell at public auction, at the office of Shelbyville Mills Company, Inc., Shelbyville, Tennessee, on the 23rd day of August, 1933, at 11:00 o'clock A. M. (Eastern Standard Time) on that day, for the account of whom it may concern, the following securities in one lot:

Two hundred fifty (250) shares of common stock without par value of Shelbyville Mills Company, Inc., a Tennessee corporation, being all of the issued and outstanding shares of stock of said corporation.

Shelbyville Mills Company, Inc., owns, free and clear without encumbrance of any kind, a cotton mill at Shelbyville, Tennessee, known as "Shelbyville Mill." Shelbyville is located in the white farming section of Tennessee, adjacent to the Duck River, in cotton growing territory, and furnishes high-class mill labor. The mill has approximately 23,000 spindles, 594 looms (Drapers) balanced for 22" yarns, and preparatory equipment, in condition for immediate operation, producing Wide Drills, Twills and Sheetings; approximately 95 acres of land; large two story brick mill of approximately 110,000 square feet floor space; one story new Weave Shop (built four years); store and office building; and 112 operatives' houses.

For detailed statement of the property, including machinery and equipment, description of real estate, and terms of sale (to be read at the time and place of sale) kindly address Donald Comer, Esq., 58 Worth Street, New York, N. Y.

Inspection by interested parties is invited, and the undersigned, Mr. A. F. Mullins, Jr., who is in charge of the property, will be glad to show it to interested parties at any time. It is suggested that prospective buyers communicate with Mr. Mullins and arrange to visit the property.

The successful bidder will be required to pay 10% of the purchase price in cash at the time and place of sale, 15% of the purchase price in ten days' time thereafter, and the seller will accept the purchaser's note for the balance of the purchase price, payable in three equal installments of ninety days each, secured by a deposit of the above stock and a mortgage on the property.

The seller reserves the right to bid at the sale.

Dated: This 22nd day of July, 1933.

A. F. MULLINS, JR.

The bearings were made of ordinary pipe sawed off and bolted to the wooden hangers by means of metal straps. Of course, there was no such thing as "fit" between the shaft and bearings. They operated with extreme looseness and rattle. Altogether the rattling, creaking and shrieking reminded me of the noise one hears on Broadway every election night. It was terrible.

To be sure, transmission of that sort is decidedly inefficient. Water power is obtained from a small stream that flows past, but it is insufficient for their entire needs and they are obliged to buy additional power from a central power station. They probably think that they are getting most of their power for "almost nothing." But not so. By installing up-to-date hangers, bearings, and shafting, the plant could be speeded up, production increased, power saved, and noise eliminated, and they would then have a factory of which they could be proud. As it is now operated they certainly are not proud of it. I dare say they "wish" they had better hangers, bearings, belting, shafting. They "wish" they could speed up. They "wish" the plant were less noisy. They "wish" they could compete more readily with modern factories.

There can be no question but that the above brand of "economy" is very expensive. With such out-of-date equipment it is exceedingly difficult to compete these days. I will wager that they are losing enough money because of poor transmission equipment alone, to pay for several complete installations of modern transmission equipment each year. Rickety transmission is usually symbolic of a rickety business organization.

Price Levels and Buying Power

(Continued from Page 4)

1933, was 3.4 per cent lower than on June 15, 1932. And this in the face of the fact that raw materials had practically doubled over the levels current the previous year.

The important fact to bear in mind is that while nationwide buying power has been enormously increased by the rise in commodity and security prices, our retail establishments still are selling countless finished products on the basis of depression lows. The same thing applies to many industrial products, particularly automobiles and farm implements.

In brief, a bale of cotton or a bushel of wheat today probably will buy more of the products of industry than at any time within the last generation.

These bargain levels necessarily can not permanently endure. The time is not far distant when living costs in terms of industrial products must advance sharply, owing to the higher costs resulting from the operation of the National Industrial Recovery Act and the processing tax imposed on certain commodities.

When the public generally comes to recognize more clearly the existence of present bargains and the eminence of a substantial rise, we do not believe it will be long before these finished goods, made out of low-cost raw materials under old working conditions, will be cleaned up. For a time, at least, these stocks will serve to cushion the effect of the advancing tendency.

Such a movement, depleting the stocks of finished goods and making its call on the output of factories and mills can hardly fail to find expansion in spreading employment, mounting buying power, and the endless ramifications that will reach out a constructive and helpful hand to all forms of industrial endeavor.

Just as declining commodity prices visited upon us all the distress and misery of depression, so we expect the buying power emanating from higher prices to aid us and maintain us on the way to expanding prosperity.

INDEX TO ADVERTISERS

Where a — appears opposite a name it indicates that the advertisement does not appear in this issue.

Page	Page
—A—	Johnson, Chas. B. —K—
Abbott Machine Co. —	Keever Starch Co. —L— 9
Akron Belting Co. —	Lockwood Greene, Engineers, Inc. —M—
Allis-Chalmers Mfg. Co. —	McCord, H. M. —
American Cyanamid & Chemical Corp. —	Manhattan Rubber Mfg. Div. of Ray-
Arnold, Hoffman & Co., Inc. —	bestos Manhattan, Inc., The —
Ashworth Bros. —	Maraton, Jno. P. Co. —
Associated Business Papers, Inc. —	Mauney Steel Co. —
—B—	Marrow Machine Co. —N—
Babbitt Bros. —	National Aniline & Chemical Co. —
Bailey Meter Co. —13	National Oil Products Co. —
Baily, Joshua L. & Co. —20	National Ring Traveler Co. —21
Barber-Colman Co. —	Neumann, R. & Co. —
Barkley Machine Works —	N. Y. & N. J. Lubricant Co. —
Borne, Scrymser Co. —	—O—
Butterworth, H. W. & Sons Co. —	Onyx Oil & Chemical Co. —11
—C—	—P—
Campbell, John & Co. —	Peach, D. W. —
Charlotte Chemical Laboratories, Inc. —21	Perkins, B. F. & Son, Inc. —
Chicago Rawhide Mfg. Co. —	Philadelphia Belting Co. —19
Ciba Co., Inc. —	Powers Regulator Co. —
Clark Publishing Co. —28	Precision Gear & Machine Co. —
Clinton Corn Syrup Refining Co. —	Propellair, Inc. —R—
Corn Products Refining Co. —27	Rhodes, J. E. & Sons —
Crompton & Knowles Loom Works —	Rice Dobby Chain Co. —21
Curran & Barry —30	Robinson, Wm. C. & Son Co. —13
—D—	Rome Soap Mfg. Co. —
Dary Ring Traveler Co. —	Roy, B. S. & Son —11
Deering, Milliken & Co., Inc. —20	Royle, John & Sons —S—
Dillard Paper Co. —21	Saco-Lowell Shops —2
Dixon Lubricating Saddle Co. —	Schachner Leather & Belting Co. —
Draper Corporation —	Seydel-Woolley Co. —
Dronsfield Bros. —	Sipp-Eastwood Corp. —
DuPont de Nemours, E. I. & Co. —	Sirrine J. E. & Co. —
DuPont Rayon Co. —	Sonoco Products —12
Durene Association —	Southern Ity. —
—E—	Southern Spindle & Flyer Co. —16
Eaton, Paul B. —19	Stanley Works —
Eclipse Textile Devices, Inc. —	Steel Heddle Mfg. Co. —
Emmons Loom Harness Co. —	Stein, Hall & Co. —
Enka, American —	Stevens, J. P. & Co., Inc. —20
—F—	Stewart Iron Works Co., Inc. —
Fidelity Machine Co. —	Stone, Chas. H. —T—
Firth-Smith Co. —	Terrell Maching Co. —
Ford, The J. B. Co. —	Texas Co. The —
Foster Machine Co. —	Textile Finishing Machinery Co. —U—
Benjamin Franklin Hotel —	U. S. Bobbin & Shuttle Co. —
Franklin Process Co. —	U. S. Ring Traveler Co. —
—G—	Union Storage & Warehouse Co. —
Garland Mfg. Co. —21	Universal Winding Co. —V—
Gastonia Brush Co. —	Veeder-Root, Inc. —17
General Dyestuff Corp. —	Victor Ring Traveler Co. —20
General Electric Co. —	Viscose Co. —W—
General Electric Vapor Lamp Co. —	WAK, Inc. —
Goodyear Tire & Rubber Co. —5	Washburn Printing Co. —26
Governor Clinton Hotel —	Wellington, Sears & Co. —20
Graton & Knight Co. —	Whitin Machine Works —
—H—	Whitinsville Spinning Ring Co. —27
Hart Products Corp. —	Wolf, Jacques & Co. —
H & B American Machine Co. —1	
Hermas Machine Co. —	
Houghton, E. F. & Co. —	
Howard Bros. Mfg. Co. —	
Hunt, Rodney Machine Co. —	
Hygrolit, Inc. —	
—J—	
Jacobs, E. H. Mfg. Co., Inc. —	
Jacobs Graphic Arts Co. —	

Hearing on Hosiery Code

A hearing on the hosiery mills code will be held August 10.

The mills are now under a temporary one. The permanent agreement was received from the National Association of Hosiery Manufacturers, claiming to represent 80 per cent of the industry.

The minimum wage scale runs from \$17 to \$27.50 a week in the North and from \$15.50 to \$25.75 in the South for the various skilled classes. Graduations drop to \$13 for the North and \$12 for the South. The learners minimum is \$8.

The maximum work week would be 40 hours in productive operations. The maximum for office workers

would be 40 hours over a six months period. Numerous workers, such as firemen and engineers, were excepted.

Flat operation would be limited to two shifts of 40 hours each a week. In full-fashioned plants which have been operating on a two-shift basis, the shifts would be limited to 36 hours each.

Worth Street on Five-Day

At a full meeting of the membership, the Association of Cotton Textile Merchants of New York voted to place all selling houses on a five-day week, closing all day on Saturdays. While the commission houses were taking this action, the offices of the Textile Fabrics Association were re-

ceiving numerous letter-ballots from converters endorsing a five-day week in their trade.

At the meeting of the Association of Cotton-Textile Merchants, a resolution was also adopted declaring this trade's desire to come under the major code of the cotton mill industry and asking approval of such action by the National Recovery Administration at Washington.

Consumption of American Cotton 14,132,000 Bales

World consumption of American cotton during the 1932-33 season, that is, the past twelve months, approximated 14,132,000 bales, according to the preliminary estimate of the New York Cotton Exchange Service. This is the largest world consumption of American cotton since the 1928-29 season, when world spinners used 15,226,000 bales of the American staple. Last season, world consumption totalled 12,506,000 bales, two seasons ago 11,113,000, and three seasons ago 13,021,000.

"The large increase in consumption of American cotton during the past twelve months," says the service, "was due to a number of factors. In the United States, cotton consumption has been of record-breaking proportions during the past three months partly as a result of the sharp upturn in general business activity and partly as a result of rapidly rising prices.

WANTED—Position as weave room or slasher room overseer, or can handle both jobs. Do not mind hard work, but would like a chance to prove ability. Will go anywhere. A-1 references. P. C. G., care Textile Bulletin.

WANTED—Position as designer, assistant designer or would take a job as weave room overseer for medium size mill, and do the designing. Education fair. Strictly sober. Single; age 33. Employed at present. Will begin at reasonable salary, with prospects for advancement. Can furnish A-1 references from present employers. S. A. J., care Textile Bulletin.



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There's only one way to be sure that Victors are right for your mill. Send a card or letter for enough sample Victor to make a real test. THEY'RE FREE!

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B. F. Barnes, Jr., 520 Angler Ave., N. E. Atlanta, Ga.
J. McD. McLeod, 80 Church St. Bishopville, S. C.

COTTON GOODS

New York.—The cotton goods markets remained quiet during the week pending further adjustments to the new conditions brought about by the textile code and imposition of the processing tax. Considerable progress has been made in clearing away many of the difficulties that have beset both buyers and sellers for the past several weeks. It is felt here that business can soon reach a position where active trading may be resumed again.

There was little new business in coarse yarn gray goods. Some sales from second hands were put through and reflected higher prices. Supplies of carded broad-operating cost under the 40-hour shift and wage increases.

Fine goods markets were the subject of little trading and the week neared a close in about the position it began. A few houses had made quotations, but few sales had been made at the new levels. Differentials made public during the day on fine goods did much to clarify a part of the difficulties under which the market had been laboring, but these was a sufficiency of additional problems. Some second hand sales of fine cottons developed from time to time, but it resulted rather from the disposal of minor quantities on which buyers had overcovered rather than any attempt at speculation. The fact that mills were very generally not in a position to quote brought out the unusual position occasionally of sales of shorts and seconds in second hands at prices which exceed those recently paid for firsts in first hands. The possibility of removal of the floor stock tax in connection with the processing tax was the most encouraging news of the week and it was felt that if this headache were removed the market might be nearly ready to resume something akin to normal trading.

Some contract business was placed in first hands on 72x48 all-rayon taffetas at 18c and that spots were offered at 18½c. The 100 denier taffetas were available, but quotations were at wide variance as between mills, ranging from 23½c to 25c on 39-inch 92x64s.

Print cloths, 28-in., 64x60s	5
Print cloths, 27-in., 64x60s	4 7/8
Gray goods, 38½-in., 64x60s	6 7/8
Gray goods, 39-in., 80x80s	9
Gray goods, 39-in., 68x72s	7 3/4
Brown sheetings, 3-yard	9 1/4
Brown sheetings, standard	10
Brown sheetings, 4-yard, 56x60s	8 1/2
Tickings, 8-ounce	18
Denims	15
Dress ginghams	12 1/2
Standard prints	7 3/4
Staple ginghams	8

J. P. STEVENS & CO., Inc.

Selling Agents

40-46 LEONARD ST., NEW YORK

YARN MARKET

Philadelphia, Pa.—There was little trading in yarns during the week. Inquiry was light and sellers showed no disposition to push sales. Manufacturers who have yarns on contract continued to press for delivery. A great many complaints over the delivery situation are current here, some consumers asserting that spinners are very lax about deliveries in many instances.

While demand has been very light, some sales were made in carded numbers. The market is not expected to become active again until after the details of the price advances made necessary by the processing tax are more clearly understood. While necessarily there is wide disparity in asking prices, in instances, it would appear that as spinners shall have more definitely ascertained their operating cost under the 40-hour shift and wage increases, there will have been established a nearer approach to a common price level.

The fact that some have a higher cost than others and that quite a few are still in the dark, doubtless accounts for much of the price variance.


There is a difference of four cents between high and low asking prices for single carded on cones, the variance depending on the mill from which the yarn in question is quoted. Some say they quote high enough to cover every imaginable additional cost which might be figured in the present costs by a spinner. So, 31 cents is heard in several houses which apparently are not eager to let go their stock yarns except at a higher than current replacement. The range generally is 29-31 cents, while as little as 27 cents is said to have been quoted in rare instances.

While demand for combed peeler knitting yarns is by no means pressing, quotations runs as high as 55 cents for singles 38s. Prices at which sales may have been made are not disclosed. Some interests say single 38s combed peeler were sold in at least one instance this week at 49½ cents.

A good many complaints from spinners about the irregular supply and high prices of cotton, especially of a staple and quality suitable for spinning high-count combed peeler yarns. Reports received here from the South indicate that during the recent break in cotton quotations, the tendency among sources was to "lock up" their remaining holdings until such time as market quotations had made full recovery to their recent maximums.

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SOUTHERN SOURCES OF SUPPLY

for Equipment, Parts, Materials, Service

Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in the TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information, service, equipment, parts or materials, and believe this guide will prove of real value to our subscribers.

Akron Belting Co., Akron, O. Sou. Rep.: L. L. Haskins, Greenville, S. C.; L. F. Moore, Memphis, Tenn.

American Cyanamid & Chemical Corp., 535 Fifth Ave., New York City. Sou. Office and Warehouse: 301 E. 7th St., Charlotte, N. C.; Paul Haddock, Sou. Mgr.

American Enka Corp., 271 Church St., New York City. Sou. Rep.: R. J. Mebane, Asheville, N. C.

Arnold, Hoffman & Co., Inc., Providence, R. I. Sou. Office: Independence Bldg., Charlotte, N. C.; R. E. Buck, Mgr. Sou. Reps.: Harold T. Buck, 511 Pershing Point Apts., Atlanta, Ga.; Frank W. Johnson, P. O. Box 1354, Greensboro, N. C.; R. A. Singleton, 2016 Cockrell Ave., Dallas, Tex.; R. E. Buck, Jr., 215 Tindal Ave., Greenville, S. C.

Ashworth Bros., Inc., Charlotte, N. C. Sou. Offices: 44-A Norwood Place, Greenville, S. C.; 215 Central Ave., S. W., Atlanta, Ga.; Texas Rep.: Textile Supply Co., Dallas, Tex.

Barber-Colman Co., Rockford, Ill. Sou. Office: 31 W. McBee Ave., Greenville, S. C.; J. H. Spencer, Mgr.

Barkley Machine Works, Gastonia, N. C. Chas. A. Barkley, president.

Borne, Scrymser Co., 17 Battery Place, New York City. Sou. Reps.: H. L. Slevier, P. O. Box 240, Charlotte, N. C.; W. B. Uhler, 608 Palmetto St., Spartanburg, S. C.; R. B. Smith, 104 Clayton St., Macon, Ga.

Brown Co., David, Lawrence, Mass. Sou. Reps.: Ralph Gossett, Woodside Bldg., Greenville, S. C.; Belton C. Plowden, Griffin, Ga.; Gastonia Mill Supply Co., Gastonia, N. C.; Russell A. Singleton, Dallas, Tex.

Butterworth & Sons Co., H. W., Philadelphia, Pa. Sou. Office: Johnston Bldg., Charlotte, N. C.; J. Hill Zahn, Mgr.

Campbell & Co., John, 75 Hudson St., New York City. Sou. Reps.: M. L. Kirby, P. O. Box 432, West Point, Ga.; Mike A. Stough, P. O. Box 701, Charlotte, N. C.; A. Max Browning, Hillsboro, N. C.

Charlotte Chemical Laboratories, Inc., Charlotte, N. C. A. Mangum Webb, Sec.-Treas.

Chicago Rawhide Mfg. Co., 1267-1301 Elston Ave., Chicago, Ill. Sou. Rep.: J. C. Duckworth, Greenville, S. C.

Ciba Co., Inc., Greenwich and Morton St., New York City. Sou. Offices: 519 E. Washington St., Greensboro, N. C.; Greenville, S. C.

Clinton Corn Syrup Refining Co., Clinton, Iowa. Sou. Reps.: J. W. Pope, Box 490, Atlanta, Ga.; Luther Knowles, Hotel Charlotte, Charlotte, N. C.

Corn Products Refining Co., 17 Battery Place, New York City. Sou. Office: Corn Products Sales Co., Greenville, S. C. Stocks carried at convenient points.

Crompton & Knowles Loom Works, Worcester, Mass. Sou. Office: 301 S. Cedar St., Charlotte, N. C. S. B. Alexander, Mgr.

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Dillard Paper Co., Greensboro, N. C. Sou. Reps.: E. B. Spencer, Box 1281, Charlotte, N. C.; R. B. Embree, Lynchburg, Va.; C. G. Brown, Lynchburg, Va.; K. E. Gouedy, Greensboro, N. C.

Draper Corporation, Hopedale, Mass. Sou. Rep.: E. N. Darrin, Vice-Pres.; Sou. Offices and Warehouses: 242 Forsyth St., S. W., Atlanta, Ga.; W. M. Mitchell; Spartanburg, S. C.; Clare H. Draper, Jr.

Du Pont de Nemours & Co., E. I., Wilmington, Del. Sou. Office, 302 W. First St., Charlotte, N. C.; John L. Dabbs, Mgr. Sou. Warehouses: 303 W. First St., Charlotte, N. C.; Wm. P. Crayton, Mgr. Sou.

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Eaton, Paul B., 218 Johnston Bldg., Charlotte, N. C.

Eclipse Textile Devices, Elmira, N. Y. Sou. Reps.: Eclipse Textile Devices Co., care Pelham Mills, Pelham, S. C.; Eclipse Textile Devices Co., care Bladenboro Cotton Co., Bladenboro, N. C.

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Firth-Smith Co., 161 Devonshire St., Boston, Mass. Sou. Rep.: Wm. B. Walker, Jalong, N. C.

Ford & Co., J. B., Wyandotte, Mich. Dist. Office: 116 Hurt Bldg., Atlanta, Ga.; Geo. W. Shearon, Dist. Mgr. Sou. Reps.: F. M. Oliver, Colonial Apt., Greensboro, N. C.; Geo. S. Webb, 405 S. Walker St., Columbia, S. C.; R. Stevens, Box 254, Greenville, S. C.

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Mauney Steel Co., 227 Chestnut St., Philadelphia, Pa. Sou. Reps.: Aubrey Mauney, Burlington, N. C.; Don L. Hurlburt, 511 James Bldg., Chattanooga, Tenn.

National Aniline & Chemical Co., Inc., 40 Rector St., New York City. Sou. Office and Warehouse: 201 W. First St., Charlotte, N. C.; Julian T. Chase, Mgr. Sou. Reps.: Dyer S. Moss, A. R. Akerstrom, W. L. Barker, C. E. Blakely, Charlotte Office; James I. White, American Savgs. Bk. Bldg., Atlanta, Ga.; H. A. Rodgers, 910 James Bldg., Chattanooga, Tenn.; J. E. Shuford, Jefferson Std. Life Bldg., Greensboro, N. C.; E. L. Pemberton, 342 Dick St., Fayetteville, N. C.

National Oil Products Co., Harrison, N. J. Sou. Reps.: R. B. MacIntyre, Hotel Charlotte, Charlotte, N. C.; G. H. Small, 210 Sixth St., N. E., Atlanta, Ga. Warehouse, Chattanooga, Tenn.

National Ring Traveler Co., 257 W. Exchange St., Providence, R. I. Sou. Office and Warehouse: 131 W. First St., Charlotte, N. C. Sou. Agt., C. D. Taylor, Gaffney, S. C. Sou. Reps.: L. E. Taylor, Box 272, Atlanta, Ga.; Otto Pratt, Gaffney, S. C.; H. L. Lanier, Shawmut, Ala.

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Onyx Oil & Chemical Co., Jersey City, N. J. Sou. Rep.: Edwin K. Klumph, 310 Hawthorne Lane, Charlotte, N. C.

Perkins & Son, Inc., B. F., Holyoke, Mass.

Philadelphia Belting Co., High Point, N. C. E. J. Payne, Mgr.

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Seydel-Woolley Co., 748 Rice St., N. W., Atlanta, Ga.

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Sirrine & Co., J. E., Greenville, S. C.

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Southern Spindle & Flyer Co., Charlotte, N. C.

Stanley Works, The, New Britain, Conn. Sou. Office and Warehouse: 552 Murphy Ave., S. W. Atlanta, Ga. H. C. Jones, Mgr.; Sou. Reps.: Horace E. Black, P. O. Box 424, Charlotte, N. C.

Steel Heddle Mfg. Co., 2100 W. Allegheny Ave., Philadelphia, Pa. Sou. Office and Plant: 621 E. McBee Ave., Greenville, S. C.; H. E. Littlejohn, Mgr. Sou. Reps.: W. O. Jones and C. W. Cain, Greenville Office.

Stein, Hall & Co., Inc., 285 Madison Ave., New York City. Sou. Office: Johnston Bldg., Charlotte, N. C. Ira L. Griffin, Mgr.

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Terrell Machine Co., Charlotte, N. C. E. A. Terrell, Pres. and Mgr.

Textile-Finishing Machinery Co., The, Providence, R. I. Sou. Office: 909 Johnston Bldg., Charlotte, N. C. H. G. Mayer, Mgr.

U S Bobbin & Shuttle Co., Manchester, N. H. Sou. Plants: Monticello, Ga. (Jordan Div.); Greenville, S. C.; Johnson City, Tenn. Sou. Reps.: L. K. Jordan, Sales Mgr., Monticello, Ga.

Universal Winding Co., Providence, R. I. Sou. Offices: Charlotte, N. C.; Atlanta, Ga.

U. S. Ring Traveler Co., 159 Aborn St., Providence, R. I. Sou. Reps.: William W. Vaughan, P. O. Box 792, Greenville, S. C.; Oliver B. Land, P. O. Box 158, Athens, Ga.

Veeder-Root Co., Inc., Hartford, Conn. Sou. Office: Room 1401 Woodside Bldg., Greenville, S. C. Edwin Howard, Sou. Sales Mgr.

Victor Ring Traveler Co., Providence, R. I. Sou. Offices and Warehouses: 615 Third National Bank Bldg., Gastonia, N. C. A. B. Carter, Mgr.; 520 Angier Ave., N. E., Atlanta, Ga.; B. F. Barnes, Mgr. Sou. Reps.: B. F. Barnes, Jr., Atlanta Office; A. D. Carter and N. H. Thomas, Gastonia Office.

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Whitin Machine Works, Whitinsville, Mass. Sou. Offices: Whitin Bldg., Charlotte, N. C. W. H. Porcher and R. I. Dalton, Mgrs.; 1317 Healey Bldg., Atlanta, Ga. Sou. Reps.: M. P. Thomas, Charlotte Office; I. D. Wingo and M. J. Bentley, Atlanta Office.

Whitinsville Spinning Ring Co., Whitinsville, Mass. Sou. Rep.: Webb Durham, 2029 East Fifth St., Charlotte, N. C.

Whitney Mfg. Co., Hartford, Conn. Sou. Rep.: Precision Gear & Machine Co., Charlotte, N. C.

Wolf, Jacques & Co., Passaic, N. J. Sou. Reps.: C. R. Bruning, 1202 W. Market St., Greensboro, N. C.; Walter A. Wood Supply Co., 4517 Rossville Blvd., Chattanooga, Tenn.

Soviet Signs Deal On Flannel Shirts

Concurrent with the placing of contracts for delivery of cotton garments, it was learned on good authority that the prospects for Soviet taking of large amounts of standard constructions of cotton gray cloths have improved measurably and that negotiations with reference to financing have progressed rapidly during recent weeks.

As reported exclusively in the *New York Journal of Commerce* a week or more ago, Amtorg Trading Corporation, Soviet's commercial representative in this country, has placed an order for 1,000,000 dozen work pants, requiring 23,000,000 yards of goods. Signatures were affixed to the contracts on this deal, and another deal involving a large quantity of flannel shirts was initiated. The shirt order, it was understood, will take the entire production of the manufacturer involved from October through June. It was said that earlier delivery was wanted, but because of the tightly sold position of flannels, October was the earliest shipment available. It was understood that standard 2.70 flannels will be used.

R. F. C. BACKING FAVORED

Amtorg's negotiations for R. F. C. financing in connection with vast quantities of gray cotton cloths, including sheetings, print cloths and some combed goods, were initiated several months ago, and it was learned that negotiations at that time were of an investigatory and inquisitory character. Since that time the public and the official attitude toward the Soviet Government has changed for the better, from the Russian viewpoint.

The loan to Russia by the R. F. C.

for the purchase of raw cotton some weeks ago signalized to cotton goods interests the resurrection of the cloth deal. Since then the actual placing of business on garments, on which it was said payment will be made on receipt of invoice, has occurred, and in the market there was some suggestion that these purchases were financed by private American banking interests.

Negotiations with the R. F. C. are currently taking place and confidence has been expressed in circles close to the Amtorg that successful culmination of the negotiations might be forthcoming shortly.

In the original discussions for the taking of gray cloths by Russia, a list of constructions based on British standards was mentioned. Since then, it was said Amtorg has been convinced of the advantage of taking standard American constructions. To make the counts originally mentioned would require expensive changes in harness equipment and would call for a premium for special weaving which would not be necessary on the standard goods.—*Journal of Commerce*.

Capacity of Country's Rayon 233,400,000 Pounds Annually

The total installed capacity of the country's rayon producers as of July 1, 1933, amounted to 233,400,000 pounds of yarn annually, according to figures compiled by the Textile Organon, published by the Tubize Chatillon Corporation. This capacity will be increased to 260,000,000 pounds as a result of additions to plants now in process of installation. The operating capacity is estimated at from 10 to 15 per cent less than the installed capacity figures of July 1, indicating a current production at the rate of approximately 210,000,000 pounds annually.

The installed capacity of viscose yarn far exceeds all other types, being 170,700,000 pounds as compared with 35,500,000 pounds of acetate, 8,900,000 pounds of cuprammonium, and 8,300,000 pounds of nitrocellulose.

Geographically the industry shows a large concentration along the Allegheny mountain region from Pennsylvania to the south. The principal factors in determining this location for the industry, according to the Organon, are the accessibility to consuming textile mills, the presence of power supply and a large water supply.



VISITING THE MILLS

Edited by Mrs. Ethel Thomas Dabbs

E. GASTONIA, N. C.

FLINT MFG. CO.—MILLS NOS. 1 AND 2

When C. L. Lytton, superintendent, passed to his eternal reward some months ago, his mantle fell upon his brother, T. L. Lytton, who was his assistant.

T. L. Lytton is making good as superintendent, assisted by his life-long friend, F. G. Withers, a wide-awake young man. These two gentlemen are not satisfied to "just make good." They are striving to excel.

The village is carefully looked after, and much thought given to cleanliness in out-of-the-way places. The mill, too, is in beautiful order, and work running as if "greased for an easy slide." The operatives are alert, bright-eyed and full of energy, neat in dress, and delightfully friendly and co-operative.

HOME ECONOMIC CLUB

When this work was about to be abandoned because of the lack of leadership, the women and girls got together, reorganized themselves and are carrying on with great credit to the community. Miss Buna Paysour is the president.

A TALENTED YOUNG MAN

M. C. Strickland and his charming wife work side by side, inspecting yarn, and are a couple it does one good to meet. Mr. Strickland is a talented taxidermist and also quite an artist. He was trained in taxidermy through the Northwestern School of Taxidermy, Omaha, Neb., and has a lot of fine mounts such as quail, owls, all kinds of hawks, a loon, a fox, a squirrel, an opossum, ducks, etc. He took to painting landscape scenery and has gone forward amazingly without lessons. Who says that mill people have no special talents?

THE LIVE WIRES

Overseers and others who take the lead in these mills are as follows: At Flint No. 1, on the day line—C. W. Cloninger, overseer carding, with R. L. Paysour, second hand in speeder room; C. L. Propst, comber man, and Harry Auton, card grinder. T. A. Smith, overseer spinning, with John Queen, second hand in spinning, and Z. C. Walker, second hand in twisting; Brady Summey and John Saunders, section men. Night line—C. W. Cashion, overseer and assistant superintendent, both mills, with George Wallace, second hand in spinning, and George McGill, second hand in twisting.

Flint No. 2, day line—C. C. Cathey, overseer carding; W. A. Pearson and Walter Gilreath, second hands, and O. B. Crook, card grinder. W. H. Starnes, overseer spinning, with M. L. Strickland, second hand in spinning, Rob Hefner, second hand in winding and spooling, and D. E. Lingerfelt, second hand in twisting.

At night—L. C. Barkley is overseer carding, with D. V. Stroup, second hand; T. S. Lytton, overseer spinning,

with Rob Pope, second hand in spinning, and E. L. Braswell, second hand in twisting. L. P. Early, master mechanic, both mills; C. O. Hartsell, shipping clerk; Miss Rosa Hamont, office stenographer.

A HIGH TYPE PEOPLE

It does one's soul good to visit such high type people as those of the Flint Mfg. Co., and we expect to become better acquainted with them in the near future.

UNION, S. C.

MONARCH AND OTTARAV

T. M. McNeill, superintendent of these mills, has been on the job 16 years—proof of his ability. Perhaps his success is in a measure due to the fact that he has never missed a copy of the TEXTILE BULLETIN. He was one of the first subscribers, received a copy of the first issue and makes sure that his subscription never runs out.

At Monarch Mill, A. L. Stutts is overseer carding and J. H. Nichols is overseer spinning.

S. A. Sparks is overseer carding and spinning at Ottarav plant; W. B. Williams is overseer weaving, both mills; J. M. Bates, overseer cloth rooms, both mills; and E. P. McWhirter, master mechanic, both mills.

NORTH LUMBERTON, N. C.

The Jennings Cotton Mill started up Monday morning, July 17th, operating on two 40-hour shifts with a \$12 minimum wage rate as adopted by the textile industry recently. The employees are very enthusiastic over the increase in wages. Some few have purchased new automobiles anticipating much pleasure during their leisure hours.

We have one church here, Missionary Baptist, which is doing very nicely in the different departments, especially the Sunday school. The pastor, Rev. R. A. Stankawaytch, preaches here four times monthly with a good attendance.

We have a very attractive village, especially when the rose bushes which surround the park are in bloom. There is a good highway leading to town which is about one mile from the village.

Mr. H. B. Gibson, Jr., assistant general manager of the Jennings and Mansfield group of mills, is one of the most cheerful men that it has ever been our good fortune to meet. He seems to be the embodiment of energy and cheerfulness combined. We appreciate the interest that he takes in us. (Don't you mean W. H. Gibson, Jr.—Aunt Becky.)

Mr. H. L. Holden, our superintendent, is very much interested in the welfare of the people and we are all very fond of him. He is a good mill official and is also a

very devout and energetic Christian. Although not a member of the Baptist church, he assists in every possible way in religious activities here.

Mr. K. F. Haman, shipping clerk, is liked very much by his acquaintances here. He takes active part in church work and is superintendent of the Sunday school.

Mr. Clayton Singletary, master mechanic, takes great interest in religious work and is highly respected and admired by the people here.

Mr. J. F. Odom, who recently moved here from Kings Mountain, holds the position as overseer of carding and spinning. He is a very energetic worker and a devout Christian. We need more of his type of overseers in the textile industry.

Mr. J. A. Melvin, overseer of day weaving, has been very successful in operating the weaving department and is much liked by his fellow employees. He is just a little fellow, weighing about 220 pounds.

Mr. J. L. Stephens, overseer of night weaving, is a jolly good fellow and is very much liked.

Mr. M. M. Jordan, cloth room overseer, always has a cheerful smile for everyone, and is admired very much.

Mr. George Hargraves has recently acquired the position as manager of the company store. We think he is well fitted for the position.

GASTONIA, N. C.

MANVILLE-JENCKES—LORAY PLANT—EVERYTHING ON A BOOM

Have not learned the new name since it has changed hands, but anyway, it will always be called "Loray" by people who have been associated with the place for years, directly or indirectly.

It is an inspirational sight to park out and watch the parade at changing time. Around 2,500 are at work here and almost as many more clamoring for "jobs."

The streets are lined with cars and the mill parking lot is packed. In fact, it looks like a circus with no clowns and all-star performers.

The overseers are busy every moment working, advising and lecturing—trying to help every operative to attain the efficiency necessary in order to keep their jobs. In the new order, there can be no toleration of indifferent, slipshod methods of operation. Every operative must give his best for the short time he or she must work.

Those who cannot qualify will have to step aside for those who can.

But operatives don't know what to do with so much leisure time. The second shift—which goes on at two or three o'clock, as the case may be, begin at twelve-thirty to gather on the mill grounds; they sit around in the shade in groups waiting impatiently for their work time.

It is illuminating to hear some of their remarks as they discuss matters among themselves:

"My name has always been called Workman but I'll have to have it changed to Worknone."

"How do I feel about the 8-hour law? Well, by golly, I feel like I'm stealing something."

"I'm 50 years old and it is the first time in my life that I can not work all I want to."

"I don't know but I'm hoping. But the way the necessities of life have gone up, I'm thinking we'll have no more, after all, than we had on low wages."

"The mills have been mighty good to us through the depression, running at a loss, and I'm hoping they make a reasonable profit now, so that this thing will last. The big boss has had it as hard as we have—and a lot more to worry about."

"Yes. Where is another industry that has cared for employees like the mills have? While they are now pledged to the government in a new deal, it is up to us all to be loyal and helpful to our employers."

And the listener felt like shouting "Amen!" to these fine, deep thinking mill workers who are fair enough to see the "other side" and recognize the truth.

TUCAPAU, S. C.

When we see this pretty village we are reminded of how dilapidated and antiquated it used to look. Truly, it gave one the blues just to drive through the place. But oh boy! what a change. It hardly seems possible for a place to undergo such a reformation.

This mill has never curtailed and has paid better wages than many others.

Twenty-two Sunday schools rooms have been added to the Baptist church, which has been remodeled, painted and beautified till it is the pride of the village.

R. F. C. workers have built attractive rock walls about the grounds were needed and otherwise improved the grounds about the church.

BASEBALL

The baseball club plays three games per week under the new schedule and had just walloped a Chester team. The office manager, G. C. White, is manager of the ball club. Roy Brannon, of Montreal (International League), and Tuck McConnell are star members and make things hot for opposing teams.

L. A. Hamer, general superintendent, is held in high esteem by the operatives, and so is J. F. Ford, assistant superintendent.

In the Crash Mill, or "No. 3," J. L. Woodward is carder; B. F. Mason, spinner, and E. P. Floyd, overseer weaving.

In "The Cloth Mill," C. L. Smith is carder; D. J. Quillan, spinner, with Tuck McConnell, second hand; W. P. Borders, overseer weaving; W. F. Ballinger, overseer cloth room; Jess West, master mechanic.

All these department heads are fine people; not a grouch among them.

INMAN, S. C.

INMAN MILLS

Work is going nicely here under the supervision of N. G. Hardie, a thorough-going young man of pleasing personality.

Machinery was being moved and more added, among the latter being Barber-Colman spoolers and warpers.

Robert Wilburn, overseer carding, was out sick; he has an able second hand, E. P. Jenkins. We hope Mr. Wilburn will soon be well. C. A. Donahoo is a progressive young section man in carding.

S. B. Smith is overseer spinning with Landrum Vaughn, second hand.

J. C. Boyce, overseer weaving, has two second hands, T. E. Stone and F. C. Jackson—a trio that make a fine team.

W. W. Gregory is overseer the cloth room; Fred Tindall, master mechanic, assisted by Tommy Conner.

Mrs. Carrie Jackson, age 71, widow of Jesse Jackson, is a live wire drawing-in hand. We found our friend, Miss Sarah Wilson, still working in the drawing-in room.

Pretty lawns, flowers, shrubbery and stately trees make the mill grounds very attractive, and ivy adorns the front of the mill, almost covering the brick wall.

Superintendent Hardie and his overseers are the kind we like to meet, and we expect to visit them again.

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WANTED—Position as master mechanic. Sober, able and capable, 12 years' experience, age 38 years. L. W., care Textile Bulletin.

WANTED—By young lady twenty years of age, college and business graduate, position as stenographer - bookkeeper and payroll clerk. Excellent reference. Address P. O. Box 783, Statesville, N. C.

WANTED—Position as superintendent combed yarn mill. 8 years as overseer, 7 years as superintendent. Experienced on 12's to 140's yarns. Age 35, married; good references. Address B. W. K., care The Textile Bulletin.

WANTED—Loom fixer, experienced on Stafford looms. Write A. W. Roper, Superintendent; W. H. Gibbs, Overseer Weaving, Indiana Cotton Mills, Cannelton, Ind.

FOR SALE OR RENT—On a reasonable basis, Yarn Mill fully equipped for 10 and 12 yarn, 2080 spindles, Lowell machinery. D. L. Rosenau, Tuscaloosa, Ala.

Outerwear Group Files Code for Its Industry

The code of fair competition applying to the knitted outerwear industry was submitted in Washington by Harold R. Lhowe, executive director of the National Knitted Outerwear Association. The code provides for a 40-hour week for labor with a minimum wage of \$13 a week for regular employees. The code as submitted bans the farming out of work to be done in homes where labor, not subject to supervision tends to degenerate in standards and remuneration.

The code when accepted will apply

to every branch of the knitted outerwear industry. Knitted outerwear is defined as including all forms of knitted goods, excepting hosiery and underwear, running through a gamut of such items as sweaters, bathing suits, knitted sports apparel, hats and similar products. The industry's annual output is in excess of \$150,000,000.

Weevil Infestation Is Heaviest in Nine Years

Greenville, S. C.—Boll weevil infestation in counties of the Piedmont section of South Carolina is estimated to be heavier now than at any time in the last nine or ten years, and the pest is likely to cause much damage in the next few weeks unless weather conditions change.

The weevils are seeking to add to the Government plan for cotton yield reduction, and they seem to be invading the areas from woodlands in a sudden spurt. Weevils have been checked in the Piedmont up to the foothills of the Blue Ridge Mountains, the second time in history that they have gotten this far up.

Unless stringent efforts to poison the weevil are made, they are likely to cause thousands of dollars worth of damage. They are hitting the crop at a crucial time with young squares and young bolls showing up in numerous quantities in fields punctured by the weevil. The rainy season of the past two weeks has done much to aid the weevil and little for the benefit of the farmer. Infestation is heavier than any year since 1924.

Finishers Advised To Boost Charges Because of N. I. R. A.

The executive committee of the National Association of Finishers of Textile Fabrics recommends that finishers advise their customers that a very careful investigation of increased costs necessitated by N. I. R. A. makes it necessary to increase finishing charges 35 per cent on all fabrics.

Until further careful investigation can determine the results necessary on the many varieties of fabrics handled it is recommended that there be applied a flat 35 per cent increase in all finishing charges on all orders received on and after July 31st in the case of finishers who have been quoting without a labor clause and a flat 35 per cent increase on all bills rendered by finishers on and after August 7, 1933, in the case of finishers who have been quoting with a labor clause included.

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